

Key Data Elements for Seafood: A Compilation of Resources

Compiled by FishWise
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The purpose of this document is to compile existing publicly available key data element (KDE) resources regarding production, product identification, and supply chain traceability for seafood into one central location. This document does not address the full scope of KDEs that can be collected for seafood products (e.g. KDEs regarding food safety are not included) nor does it seek to define or clarify KDE definitions or terms. This document is intended for informational purposes only and should not be construed as legal advice nor as providing recommendations of any kind. Readers should always refer to the original reference source for complete information and important contextual background such as the scope and objectives of the specific resource. FishWise cannot be held liable for the accuracy or completeness of this document.



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Introduction

This document is a compilation of key data elements (KDEs) that FishWise gathered from publically available reports, regulations, and guidelines developed by various stakeholder groups, including certification and standards bodies, government and intergovernmental organizations, the seafood industry, conservation groups, and traceability experts. Over the last several years, discussions regarding seafood traceability have advanced on multiple fronts, through emerging government regulations in major seafood importing markets, rapidly evolving supply chain technologies and systems, and coalescing multi-stakeholder and industry-led initiatives. KDEs are widely accepted as the foundation of any product tracing or traceability system in any industry and thus have been a central component of these recent seafood traceability efforts and discussions.

While there is no single prescriptive approach or tool for improving seafood traceability, the end goal that stakeholders should be working towards is a shared one: end-to-end, electronic, and interoperable traceability. However, in order to reach that point, there first needs to be a globally agreed upon and standardized set of KDEs related to seafood production and product identification. Establishing a standardized vocabulary, as well as standardized data formatting, will provide a common language for how information about products is received and exchanged through supply chains, as well as communicated to regulators and fisheries management authorities. FishWise hopes that as various groups and initiatives begin to identify and discuss KDEs relevant to their work, that they will use ‘Key Data Elements for Seafood: A Compilation of Resources’ to align (to the extent possible) with other efforts and projects, and to track developing KDE requirements and recommendations.

This document is intended as a resource for other initiatives and organizations to reference as helpful, with the sole purpose of compiling existing KDE resources relating to production, product identification, and supply chain traceability for seafood into one resource. This is an objectively compiled list of KDEs from various publically available sources. This document is not intended to recommend or prescribe KDE norms or best practices for seafood, nor does it seek to define or clarify KDE definitions or terms. The [Global Dialogue on Seafood Traceability](#) – an international business-to-business platform established in 2016 to advance a unified framework for interoperable seafood traceability practices – will be where normative discussions regarding seafood KDEs take place. While the KDEs listed here have not been altered from their original wording, readers should always refer to the original source for complete information and important contextual background.

FishWise will make “Key Data Elements for Seafood: A Compilation of Resources” available on FishWise’s [Traceability Resources](#) and [Human Rights Resources](#) webpages and will continue to update it as both existing and additional efforts and resources become available, finalized, or updated. When a KDE source is updated in the document, FishWise will add the date to that specific entry. Dates will not be assigned to KDE entries that have not been updated since the original publication of this document.



In addition to this document, FishWise has published a compilation of existing, publically available reports from a variety of sources that address social responsibility in seafood supply chains. While “Key Data Elements for Seafood: A Compilation of Resources” focuses on the data associated with seafood production, product identification, and supply chain traceability, the social responsibility document captures additional information that may not travel with products as they move through supply chains but is relevant to monitoring, assessing, and/or collecting important information regarding social responsibility, worker well-being, and human rights in seafood. The report, titled “[Social Responsibility Information for Seafood Supply Chains: A Compilation of Resources](#),” is available on FishWise’s Traceability and Human Rights Resources webpages.

To suggest additional KDE resources to be added to “Key Data Elements for Seafood: A Compilation of Resources” or updates to existing resources, please contact Alanna Gisondo at a.gisondo@fishwise.org.

Certifications and Standards

Alaska Responsible Fisheries Management Chain of Custody Standard

http://www.alaskaseafood.org/wp-content/uploads/2016/01/CoC-Standard-V-2.4_Nov2015.pdf

The Alaska Seafood Marketing Institute (ASMI) website states that ASMI is a “marketing organization with the mission of increasing the economic value of the Alaska seafood resource.” ASMI is a public-private partnership between the State of Alaska and the Alaska seafood industry. The Alaska Responsible Fisheries Management (RFM) Fisheries Standard has been in existence since 2010. The fundamental basis of the Alaska RFM Fisheries Standard and Program is the 1995 Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries and the FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Marine Capture Fisheries. If a company buys seafood from an Alaska RFM certified fishery and wishes to make the certified claim or use the RFM seal, then chain of custody certification is required via the Alaska RFM Chain of Custody Standard.

Please note that the KDEs below are taken from the Alaska RFM Chain of Custody Standard. Please refer to the [Alaska RFM Fisheries Standard](#) for information regarding the Fisheries Standard.

Traceability within the supply chain (minimum information for each consignment of seafood):

- Species name
- Catch area

Traceability and labelling:



- Commercial species name
- Country of origin
- Fishing/catch area
- Product description
- Product code or production code number

Aquaculture Stewardship Council Chain of Custody Standard

<http://www.asc-aqua.org/?act=tekst.item&iid=6&iids=290&lng=1>

Founded in 2010 by the World Wildlife Fund (WWF) and Dutch Sustainable Trade Initiative (IDH), the Aquaculture Stewardship Council (ASC) is an independent not for profit organization with global influence. ASC aims to be the world's leading certification and labelling programme for responsibly farmed seafood. The ASC's primary role is to manage the global standards for responsible aquaculture, which were developed by the WWF Aquaculture Dialogues. The use of the ASC ecolabel can be applied only to products that are sold through a consecutive, certified Chain of Custody (CoC) that ensures traceability of certified products from production to final point of sale. For ASC, CoC is certified through application of the MSC CoC, to which ASC CoC requirements have been added as a scope, to ASC certified aquaculture products. Only products that originate in ASC certified farms and are sold through an MSC certified CoC (with ASC CoC scope) are eligible to carry the ASC ecolabel. The social responsibility components of the ASC standards for various species can be found in FishWise's "[Social Responsibility Information for Seafood Supply Chains: A Compilation of Resources](#)."

See the Marine Stewardship Council Product Chain of Custody Standard summary for ASC/MSC CoC requirements. To refer to the ASC Standards for various species, please refer to the [ASC Standards webpage](#).

Best Aquaculture Practices Traceability Record-Keeping Requirements

<http://bap.gaalliance.org/bap-standards/>

Best Aquaculture Practices (BAP) is an aquaculture certification program developed by the Global Aquaculture Alliance (GAA). BAP certification standards exist for the entire aquaculture supply chain, including seafood processing plants, farms, hatcheries, and feed mills. BAP certification is based on independent audits that evaluate compliance with the BAP standards. The Traceability Record-Keeping Requirement is included in each BAP standard for the purpose of establishing product traceability. The social responsibility components of the BAP Traceability Record-Keeping Requirements can be found in FishWise's "[Social Responsibility Information for Seafood Supply Chains: A Compilation of Resources](#)."



Please note the KDEs listed below reflect only the Traceability Record-Keeping Requirement sections of the various standards listed below and not the full BAP Certification Standards and Guidelines in their entirety. Links to the full BAP Certification Standards and Guidelines for each facility type are included below.

Finfish and crustacean farms (shall be recorded for each culture unit and each production cycle):

<http://www.bapcertification.org/wp-content/uploads/2017/01/Finfish-Crustacean-Farm-Standard-Issue-2-Revision-3-16-November-201....pdf>

- Culture unit identification number
- Unit area or volume
- Stocking date
- Quantity of fingerlings or postlarvae stocked
- Source of fingerlings or postlarvae (hatchery)
- Antibiotic and drug use
- Sulfite use in shrimp
- Herbicide, algicide and other pesticide use
- Manufacturer and lot number for each feed used
- Harvest date
- Harvest quantity
- Movement document number (if applicable)
- Processing plant(s) or purchaser(s) (identify all if any harvest quantity goes to more than one plant or purchaser)

Mussel farms (traceability records can include the following):

<http://www.bapcertification.org/wp-content/uploads/2017/01/BAP-MusselF-813.pdf>

Basic traceability records:

- Farm name and government registration/license numbers, where applicable
- Harvester identity
- Culture unit area, location, farm site or lease area
- Common and scientific names of mussels cultivated
- Harvest date and time (removal from harvest water and off-loading to temperature control)
- Harvest method and quantity (assigned lots or units)

Ancillary traceability records:

- Use of depuration with details for application
- Use of wet storage with details for application
- Use of prior relaying with details for duration and application
- Transport identification, time, and temperatures
- Processing plant(s) or purchaser(s)
- Unusual events that could affect quality or safety
- Source of seed (hatchery name or wild geographic source)



Mollusk farms (shall be recorded for each culture unit and each production cycle):

<http://www.bapcertification.org/wp-content/uploads/2017/01/BAP-MolluskF-516.pdf>

- Culture unit identification number
- Unit area
- Common and scientific names of shellstock cultivated
- Stocking date
- Quantity of seed stocked
- Source(s) of seed
- Chemical use
- Manufacturer and lot number for each feed used
- Harvest date
- Harvest quantity
- Movement document number (if applicable)
- Purchaser(s) (identify all if any harvest quantity goes to more than one purchaser)

Traceability records can also include:

- Government registration/license numbers, where applicable
- Type of culture unit
- Seed collection time and method
- Unusual events that could affect quality or safety
- Results of tests for contaminants before harvest
- Harvest method and container type
- Harvester identify
- Time produce out of water prior to receipt by processing/depuration/dispatch facility
- Use of depuration with details for application
- Use of depuration with details for application
- Cold chain storage

Finfish, crustacean, and mollusk hatcheries and nurseries (shall be recorded for each culture unit and each production cycle):

<http://www.bapcertification.org/wp-content/uploads/2017/01/BAP-FishCrustH-914.pdf>

- Culture unit identification number
- Unit area or volume
- Stocking date
- Quantity of live aquatic products stocked
- Source of live aquatic products
- Health status of live aquatic products stocked
- Drug and vaccine use
- Herbicide, algicide and other pesticide use



- Manufacturer and lot number or production date for each feed used
- Source and lot number for each live feed used
- Shipment date
- Shipment quantity
- Movement document number (if applicable)
- Recipient(s) or purchaser(s) (identify all if any egg or juvenile crop goes to more than one farm or purchaser)
- Health status of live aquatic products sold or transferred to another facility

Feed mills (records shall be maintained for each of the following):

<http://www.bapcertification.org/wp-content/uploads/2017/01/BAP-Feedmill-714.pdf>

For all incoming ingredients:

- Ingredient type
- Date received
- Shipper's name, address and contact details
- Supplier's name, address and contact details
- Unloading assignment
- Bulk quantity or number of bags
- Bag size
- Packaging type
- Unique lot number
- Quality comments
- Receiver's signature
- Expiration date, if applicable

For medicated feeds:

- Drug name, including potency
- Date received
- Quantity
- Supplier's name
- Supplier's code for drug, if applicable
- Supplier's lot or code number
- Return of any damaged or unacceptable drugs

For finished feed products:

- Manufacturing date
- Ingredient source(s) including all additives
- Feed type mixed
- Processing conditions
- Unique lot number
- Actual yield



- Mixing personnel
- Bin assignment
- Drug inclusion(s)
- Expiration date for medicated feed, if applicable
- Sequencing and flushing
- Dispatch date
- Name, address, and contact details for transporter
- Name, address, and contact details for destination/purchaser (including BAP certification number, if applicable)
- Misformulated, damaged, or returned feed status, especially for medicated feed

Salmon farms (shall be recorded for each culture unit and each production cycle):

<http://www.bapcertification.org/wp-content/uploads/2017/01/BAP-SalmonF-1016.pdf>

- Culture unit identification number
- Unit area or volume
- Stocking date
- Common and scientific names of fish
- Quantity of smolts stocked
- Source of smolts (hatchery)
- Antibiotic and drug use
- Herbicide and other pesticide use
- Manufacturer and lot number for each feed used
- Movement of fish among cages
- Unusual events that could affect quality or safety
- Results of tests for contaminants before harvest
- Harvest date
- Harvest method
- Harvest quantity
- Transport method
- Processing plant(s) or purchaser(s)

Seafood processing and repacking plants:

<http://www.bapcertification.org/wp-content/uploads/2017/01/BAP-ProcPlant-1215.pdf>

Farm supplies:

- Farm supplier name
- BAP farm certification number
- Production method (pond, cages, reservoir, etc.)
- Identification of production unit
- Sources of post larvae/stocking material
- Date of deliveries and lot numbers (one pond or culture unit on a single day)



- Unit of measure and total net weight for mass balance
- Movement document number (if relevant)
- Feed use (type and lot numbers)
- Reports of chemical treatments
- Testing data for the presence of microbes, antibiotics and chemicals in product

Ingredients/Packaging materials

- Supplier name
- Facility invoice number and/or purchase order number
- Receiving date, quantity and lot number
- Full description of the item (ex: 3 mm poly film, sodium tripolyphosphate, batter, breeding)
- All label information including ingredients in, for example, the batter or breeding where applicable
- Lot number assigned by the facility when receiving in (if different from receiving lot number)
- Storage location

Production and Finished Product

- Facility BAP certification number
- Lot number
- Production date (process date or date code)
- Line number and/or shift, if applicable
- Species (common name and scientific name)
- Size grade
- Country of origin
- Product form
- Unit of measure and total net weight for mass balance
- Accurate labelling: for the above and all other required information – ingredients, handling instructions, facility address or registration number where applicable, amount, source, and other full identification information for raw material used (shrimp, tilapia, etc., delivered from what farm and when)
- Amount and full identification information (see receiving) for any ingredients used (breeding, marinades, batter, spices, etc.) for each lot of production
- Amount and full identification for any chemicals used (phosphates, sulphites) for each lot of product
- Amount and full identification for all packaging used for each lot of production

Product Destinations

- Lot number
- Storage location
- Shipping – company, method, date
- Unique shipping identifiers – container or seal number, bill of lading
- Receiving customer information – name, address, invoice, or order number
- Breakdown of all species, products, quantities, weight, sizes and lot numbers included in the shipment



Fair Trade USA: Capture Fisheries Standard

http://fairtradeusa.org/sites/default/files/wysiwyg/filemanager/fish/FTUSA_CFS_CC_1.0v1_EN_121914_FINAL.pdf

Fair Trade USA, a non-profit organization, is a leading third-party certifier of Fair Trade products in the United States. Fair Trade uses a market-based approach to ensure safe working conditions, and helps producers compete equitably in international markets. Fair Trade USA launched its Capture Fisheries Program in 2014, in an effort to bring small-scale fishermen and their communities the benefits of Fair Trade. The Capture Fisheries Program uses a step-wise approach that requires fishers to address and improve social, economic, and environmental conditions over time. To ensure that Fair Trade seafood can be identified and traced along the supply chain, all traders must adhere to Fair Trade traceability guidelines as well as provide and retain Chain of Custody (CoC) records with Fair Trade-required product information. The social responsibility components for the Fair Trade Capture Fisheries Standard can be found in FishWise's "[Social Responsibility Information for Seafood Supply Chains: A Compilation of Resources](#)."

Vessels record fishing trip data with crew lists for each voyage. Records shall include:

- Date of trip
- Fishing location
- Time out/time in
- Port/Landing site
- Vessel name
- Captain(s)/skippers name(s) (part of crew list)
- Crew names, ages, and titles if relevant (part of crew list)
- Fishing licenses (license numbers) held by fishers in crew
- Whether fishing by share-catch agreement
- Type of gear used

Fishing trips record catch data on primary and secondary species by:

- Species
- Cumulative landed weight for each species
- Number of individuals of each species
- The total length of individuals of each species
- ETP classification of each species where appropriate

Fishing trips record catch data on bycatch species by:

- Species
- Number of Individuals of each species
- ETP classification for each species, where appropriate

Records are maintained of all products and sourced from the registered fishers. These documents indicate:

- The name of the individual fisher



- Date of purchase
- Product name
- Volume
- Price received by the member

Records are maintained of all Fair Trade sales. These documents (e.g., invoices, contracts, bill of lading, delivery notes, etc.) indicate:

- Volume sold
- Name of the buyer
- Date of the transaction
- Reference clearly indicating the product is Fair Trade Certified
- Reference to purchase documentation that allows the certification body to link these records with the corresponding sales documentation

GS1 Foundation for Fish, Seafood, and Aquaculture Traceability Implementation Guideline

http://www.gs1.org/sites/default/files/docs/traceability/GS1_Foundation_for_Fish_Seafood_Aquaculture_Traceability_Guideline.pdf

GS1 is a global, not-for-profit information standards organization that seeks to improve the efficiency and visibility of supply and demand chains across sectors. The GS1 system of standards are open and freely available, and encompass the automatic identification of products, locations, parties, assets, logistic units, shipments, and documents. The GS1 Foundation for Fish, Seafood, and Aquaculture Traceability Implementation Guideline aims to provide guidance to assist fish, seafood, and aquaculture distribution channel participants and GS1 Member Organizations in using GS1 standards to identify, capture, share, and use information regarding seafood traceability.

Minimum requirements for consumer item and case-level packaging traceability:

- Brand owner/company name
- Consumer item product description
- Lot number as defined
- Global Trade Item Number (GTIN)
- Best-before-date or sell-by-date or use-by-date or production-date
 - “Seafood industry terminology is Lot Code/Date Code”

Requirements for pallet traceability:

- GS1 Serial Shipping Container Code (SSCC)



- The SSCC number is typically part of a larger label affixed to the pallet. Additional information may be shown on the label, depending on the requirements of the trading partner. Most often the additional human readable information includes:
 - Shipper name and address
 - The carrier
 - Delivery information

Requirements for shipment traceability:

- GTIN
- SSCC
- Batch/lot or serial numbers
- Quantity shipped
- Shipping and receiving dates
- Ship from and destination locations
- In addition, other useful information such as the following may be included as appropriate:
 - Stock Keeping Unit (SKU)
 - Production date if product is for retail store-processing or foodservice
 - Sell-by date or best-before date if applicable
 - County of Origin Labeling Statement or ISO Country Number(s)
 - Labeling for wild caught or farm raised

Maintaining traceability for product from live seafood providers:

- Provider identity
- Accurate farm/vessel information depending on species of the seafood received
- Purchase order number or live receiving ticket
- Date of shipment and receipt
- Carrier name and trailer number
- Count of seafood

Examples of KDEs that could be implemented using components of the GS1 System portfolio:

- GTIN
- Lot
- Quantity or net weight
- Expiration or best before date
- Fishing Vessel Global Location Number (GLN)
- Fishing vessel name
- Production unit GLN
- Production unit name
- Fish species (aquatic species code)
- Scientific name
- Commercial designation
- Catch area



- Catch date(s)
- Supplier Global Location Number (GLN)
- Supplier name
- Production method
- First freeze date
- Storage state code
- Fishing Gear Type
- Fish quality grade
- Fish size
- Fish presentation

GS1 U.S. Seafood Traceability Proof of Concept Project Overview

https://www.gs1us.org/DesktopModules/Bring2mind/DMX/Download.aspx?command=%20core_download&entryid=588&language=en-US&PortalId=0&TabId=134

GS1 U.S. is a not-for-profit information standards organization. As part of the GS1 U.S. Seafood Traceability Readiness Program, launched in 2013, GS1 U.S. partnered with the National Fisheries Institute (NFI) to sponsor a Proof of Concept with the goal to assess the current state of traceability data today, and to perform a gap analysis between the current state and the desired state to move forward.

Refined set of KDEs captured during the Proof of Concept:

- Critical tracking event (CTE) type
- CTE ID
- Event owner (GLN)
- Date/Time
- Event location (GLN)
- Trading partner (GLN)
- Item ID (GTIN)
- Lot/batch/serial number
- Quantity
- Unit of measure
- Activity ID
- Activity type

Sustainability attributes:

- Item code
- Lot number
- Production area
- Country of origin



- Wild - management entity
- Wild - management zone
- Wild - catching country
- Wild - fishing method
- Wild - Blue Ocean Institute ranking
- Wild – Monterey Bay Aquarium ranking
- Wild – Marine Stewardship Council (MSC) Chain of Custody (CoC) certification
- Wild – Alaska Marketing Institute Responsible Fisheries Management (RFM) CoC certification
- Farmed - farming country
- Farmed – Best Aquaculture Practices (BAP) star certification
- Farmed - certification number
- Farmed - food safety certification
- Farmed - sustainability certification

ISO 12875:2011 Traceability of Finfish Products (Marine-Captured)

http://www.iso.org/iso/catalogue_detail?csnumber=52084

The International Organization for Standardization (ISO) is an independent, non-governmental international organization. The ISO website states that “through its members, ISO brings together experts to share knowledge and develop voluntary, consensus-based, market relevant International Standards that support innovation and provide solutions to global challenges.” Released in 2011, the Traceability Standard for Finfish Products outlines the information to be recorded in marine-capture finfish supply chains in order to establish traceability. It specifies how traded fishery products are to be identified, and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. The standard deals with the distribution for human consumption of marine-captured finfish and their products, from catch through to retailers or caterers.

ISO 12875:2011 includes a comprehensive list of KDEs. The full standard can be [purchased](#) through ISO.

ISO 1287:2011 Traceability of Finfish Products (Farmed)

<https://www.iso.org/standard/52085.html>

ISO 12877:2011 specifies the information to be recorded in farmed finfish supply chains in order to establish the traceability of products originating from farmed finfish. It specifies how traded fishery products are to be identified, and the information to be generated and held on those products by each of the food businesses that physically trade them through the distribution chains. It is specific to the distribution for human



consumption of farmed finfish and their products, from finfish meal, breeding and finfish farming through to retailers or caterers.

ISO 1287:2011 includes a comprehensive list of KDEs. The full standard can be [purchased](#) through ISO.

Marine Stewardship Council Fisheries Standard

<https://www.msc.org/documents/scheme-documents/fisheries-certification-scheme-documents>

The Marine Stewardship Council (MSC) is an international non-profit organization that sets standards for sustainable wild fishing and supply chain traceability through two standards: 1) the MSC Fisheries Standard is used to assess the sustainability of wild-capture fisheries and 2) the MSC Chain of Custody Standard ensures traceability, meaning that the MSC ecolabel is only displayed on seafood from an MSC certified sustainable fishery.

Interested parties should refer to the MSC Fisheries Standard link above to reference the MSC fisheries certification scheme documents in their entirety. The MSC fisheries certification scheme documents include the fisheries standard alongside requirements and guidance documents to support fishery assessments towards certification.

Marine Stewardship Council Chain of Custody Standard

<https://www.msc.org/documents/scheme-documents/chain-of-custody-certification-scheme-documents>

The MSC Chain of Custody (CoC) Standard is a traceability and segregation standard that is applicable to the fully supply chain from a certified fishery or farm to final sale. Each company in the supply chain handling or selling an MSC certified product must have a valid MSC CoC certificate. Businesses are audited by independent certifiers to ensure that all requirements are met.

Interested parties should refer to the MSC CoC Standard link above to reference the MSC/ASC CoC certification scheme documents in their entirety. The MSC CoC scheme documents include the CoC standard along with CoC standard requirements and guidance documents.

Marine Stewardship Council Product Provenance and KDEs Consultation

<https://improvements.msc.org/database/product-provenance>



In September 2016, MSC sought public consultation regarding proposed changes to the MSC CoC standard. The proposed changes listed below reflect a desire to collect and transmit more detailed information regarding the harvesting of the product. It is important to note that this process is not final and a final implementation date has yet to be set.

Current MSC CoC reporting requirements:

- MSC/ASC status by batch
- Species in scope

2017 MSC CoC proposed changes:

- Species by batch
- MSC Fishery of origin by batch
- Country of origin by batch

Longer-term ambitions for MSC CoC scope (beyond 2017):

- Gear type by batch
- Vessel name by batch
- Catch area by batch
- Catch date by batch

Government and Intergovernmental Organizations

Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (Vessel Call-In Reporting Requirements)

<http://www.fao.org/3/a-i5469t.pdf>

The Agreement on Port State Measures (PSMA) to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (the Agreement) was adopted by the FAO Conference in 2009 and entered into international force on June 5, 2016 after it surpassed ratification by 25 countries. The PSMA seeks to deter IUU fishing through the adoption and implementation of robust and effective port state measures. One major provision of the PSMA is that all foreign vessels seeking entry in ports whose governments are Parties to the Agreement must report vessel call-in information to relevant port authorities. After receiving the vessel's call-in information, as well as any other information the port State may require to determine whether the vessel



requesting entry has engaged in IUU fishing or fishing related activities in support of such fishing, the port State can decide whether to authorize or deny entry of the vessel into its port.

Information to be provided in advance by vessels requesting port entry:

- Intended port of call
- Port State
- Estimated date and time of arrival
- Purpose(s)
- Port and date of last port call
- Name of the vessel
- Flag State
- Type of vessel
- International Radio Call Sign
- Vessel contact information
- Vessel owner(s)
- Certificate of registry ID
- IMO ship ID, if available
- External ID, if available
- RFMO ID, if applicable
- VMS
 - No
 - Yes: National
 - Yes: RFMO(s)
 - Type
- Vessel dimensions
 - Length
 - Beam
 - Draft
- Vessel master name and nationality
- Relevant fishing authorization(s)
 - Identifier
 - Issued by
 - Validity
 - Fishing area(s)
 - Species
 - Gear
- Relevant transshipment authorization(s)
 - Identifier
 - Issued by
 - Validity
- Transshipment information concerning donor vessels
 - Date
 - Location



- Name
- Flag State
- ID number
- Species
- Product form
- Catch area
- Quantity
- Total Catch Onboard
 - Species
 - Product form
 - Catch area
 - Quantity
- Catch to be offloaded
 - Quantity

Council Regulation (EC) No 1005/2008

<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02008R1005-20110309>

Council Regulation (EC) No 1005/2008 seeks to prevent, deter, and eliminate the import of illegal, unreported, and unregulated (IUU) fishery products into the European Union. Introduced in 2008, the Regulation went into force in January 2010 and created new requirements for fish and fisheries products entering the EU market from non-EU countries. One of these requirements is that seafood imported into the EU is accompanied by catch certificates attesting to the legality of the underlying fishing. The catch certificate applies to all unprocessed or processed catches, except for aquaculture, products obtained from fry or larvae, freshwater fish, ornamental fish and certain mollusks. Annex I of the Regulation lists the full range of excluded products. All information provided through the catch certificate must be certified by the flag state of the fishing vessel before the product is shipped to the EU. The EU maintains a [list](#) of the authorities that can certify catch certificates. The KDEs listed below are those found on the EU catch certificate form.

European Community Catch Certificate:

- Document number
- Validating Authority
- Name
 - Address
 - Telephone and Fax
- Fishing vessel name
 - Flag – home port and registration number
 - Call sign
 - IMO/Lloyd's number (*if issued*)
 - Fishing license No – Valid to



- Inmarsat No, Fax No, Telephone No, E-mail address (*if issued*)
- Description of product
 - Type of processing authorized on board
 - References of applicable conservation and management measures
 - Species
 - Product code
 - Catch area(s) and dates
 - Estimated live weight (kg)
 - Estimated weight to be landed (kg)
 - Verified weight landed (kg) *where appropriate*
- Name of master of fishing vessel – Signature – Seal
- Declaration of transshipment at sea
 - Signature and date
 - Transshipment date/area/position
 - Estimated weight (kg)
 - Master of receiving vessel
 - Signature
 - Vessel name
 - Call sign
 - IMO/Lloyds number (*if issued*)
- Transshipment authorization within a port area
 - Name
 - Authority
 - Signature
 - Address
 - Tel.
 - Port of landing
 - Date of landing
 - Seal (stamp)
- Name and address of exporter
 - Signature
 - Date
 - Seal
- Flag State authority validation
 - Name/title
 - Signature
 - Date
 - Seal (stamp)
- Transport details
- Importer declaration
 - Name and address
 - Signature
 - Seal



- Product CN code
- Documents under Articles 14(1), (2) of Regulation EC No.../2008
- References
- Import control – authority
 - Place
 - Importation authorized (*tick as appropriate*)
 - Importation suspended (*tick as appropriate*)
 - Verification requested – date
 - Customs declaration (if issued)
 - Number
 - Date

Additional information required on UK catch certificates:

- Document number
- Validating authority and contact information
- Fishing vessel license
- Reference of applicable conservation and management measures
- Name of master of fishing vessel (signature and/or seal)
- Name and address of exporter
- Importer declaration (name, address, signature, date of import)
- Import control authority (and whether it was allowed/not allowed to be imported)

Council Regulation (EC) No 1224/2009

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:343:0001:0050:EN:PDF>

EU Fisheries Control Regulation (EC) 1224/2009 established a Community control system for ensuring compliance with the rules of the EU's Common Fisheries Policy. The Regulation requires the traceability and availability of product information for unprocessed fishery and aquaculture products throughout the supply chain. This Regulation applies only to fishery and aquaculture products that were caught and landed in the EU.

Minimum labelling and information requirements for all lots of fisheries and aquaculture products*:

- Identification number of each lot
- External identification number and name of the fishing vessel or the name of the aquaculture production unit
- [FAO alpha-3 code](#)
- Date of catches or the date of production
- Quantities of each species in kilograms expressed in net weight or, where appropriate, the number of individuals
- Name and address of the suppliers
- Information to consumers provided for in Article 8 of Regulation (EC) No 2065/2001



- Whether products have been previously frozen or not

**Information to consumers provided for in Article 35 of Regulation (EU) No 1379/2013*

Regulation (EU) No 1379/2013

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0001:0021:EN:PDF>

The Common Organization of the Markets (CMO) Regulation was originally introduced in the EU in 2000, requiring Member States to provide consumers with specific catch information at the point of sale, including commercial designation, production method, and catch area. As part of reforms to the EU Common Fisheries Policy, consumer information requirements under the CMO Regulation were extended in 2013 through CMO Regulation No. 1379/2013. The Regulation stipulates that certain product information must be provided to the final consumer or to a mass caterer, and applies to fishery and aquaculture products in the CN03 customs commodity code from Member States and third countries.

Mandatory Consumer Information:

- Commercial designation of the species
 - *The name of the species in the official language or languages of the Member State concerned*
 - *Where applicable, any other name or names that are accepted or permitted locally or regionally*
- Scientific name
 - *In accordance with the [FishBase Information System](#) or the [FAO ASFIS database](#)*
- Production method, in particular by the following words:
 - "...caught..."
 - "...caught in freshwater..."
 - "...farmed..."
- Catch or production area
 - *Caught at sea: the sub-area or division listed in the FAO fishing areas, and the name of such zone expressed in terms understandable to the consumer*
 - *Caught in freshwater: a reference to the body of water of origin*
 - *Aquaculture: a reference to the Member State or third country in which the product reached more than half of its final weight or stayed for more than half of the rearing period or in the case of shellfish, underwent a final rearing or cultivation stage of at least six months*
- Category of fishing gear (as outlined in Annex III of the Regulation)
- Whether the product has been defrosted
- Date of minimum durability, where appropriate
- Additional voluntary information
 - Date of catch or harvest
 - Date of landing or information on the port of landing
 - More detailed information on the type of fishing gear
 - For fishery products caught at sea, details of the flag state of the fishing vessel



- Environmental information
- Information of an ethical or social nature
- Information on production techniques and practices
- Information on the nutritional content of the product

The Oceans and Fisheries Partnerships Catch Documentation and Traceability System

<https://www.usaid.gov/asia-regional/fact-sheets/oceans-and-fisheries-partnership>

The Oceans and Fisheries Partnership between the United States Agency for International Development, the Southeast Asian Fisheries Development Center and the Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security works to strengthen regional cooperation to combat illegal, unreported and unregulated fishing, promote sustainable fisheries, and conserve marine biodiversity in the Asia-Pacific region. The Oceans and Fisheries Partnership is developing a risk-based, electronic catch documentation and traceability system (CDTS) to help ensure that fisheries resources are legally caught and properly labeled. The CDTS will apply to wild capture fisheries in Southeast Asia and the Pacific Region. The final specifications of the CDTS and the KDEs that the CDTS will capture are not yet final. FishWise will update this report when additional information has been released.

Report of the Expert Consultation of Regional Fishery Management Bodies on Harmonization of Catch Certification

<http://www.fao.org/docrep/005/y8252e/y8252e0a.htm#bm10.1>

The Report of the Expert Consultation of Regional Fisheries Management Bodies on the Harmonization of Catch Certification was published in 2002 after the use of catch certification and trade documentation for the control of imports of fish products had rapidly developed. Originally introduced by the International Commission for the Conservation of Atlantic Tunas (ICCAT) for the management of bluefin tuna, the catch documentation system employed by ICCAT was subsequently adopted by other Regional Fishery Bodies for tuna and tuna-like species. The rapid introduction of the schemes led to concerns that there would be a proliferation of different forms to be completed and that this would cause confusion amongst fishermen and customs officials. To address these concerns, the Expert Consultation developed recommendations for “basic items” and procedures to be included in harmonized catch certification and catch documentation schemes. The “basic items” outlined below are recommendations on what information should be included in harmonized catch certificates and trade document forms.

**A check mark (✓) indicates basic items to be included on catch certificate forms.*



**A diamond (◇) indicates basic items to be included on trade document forms.*

Basic items to be included in the catch certificate or trade document forms:

- Tariff Commodity Code ◇
- Issuing Authority (Regional Fishery Body or Flag State) √ ◇
- Unique document number (can be given by authority or by users according to specific system) √ ◇
- Fishing vessels
 - Name √ ◇
 - Identification number (registration number, call sign) √
- Flag State √ ◇
- Name of captain √ ◇
- Authority to fish (Yes/No) √ ◇
- Fish (Landed/Transshipped/Exported)
 - Weight of fish by species and product type √ ◇
 - Area (specific) of capture √ ◇
 - Period of capture (Start Date/End Date) √ ◇
 - Date of landing √ ◇
 - Gear used √ ◇
- Person who validated the document
 - Name √ ◇
 - Title/Position √ ◇
 - Authorizing authority √ ◇
 - Address √ ◇
 - Seals and signature √ ◇
- Exporters (or re-exporters)
 - Name ◇
 - Company ◇
 - Address ◇
 - Signature ◇
 - Weight of fish by species and by product type ◇
 - Catch certificate number (if different export certification is prepared) ◇
 - Import details if re-exportation (copy of original import document required) ◇
- Importers
 - Name ◇
 - Company ◇
 - Address ◇
 - Signature ◇
 - Weight of fish by species and by product type ◇
 - Export document and/or catch certificate numbers (if independent document is prepared) ◇
 - Point of unloading ◇



From report: "Catch certifications are issued at the point of harvesting and cover all fish to be landed or transshipped, while trade documents are issued only with respect to products that enter international trade. Both types of documents contain information in relation to the fish in question, although catch certifications contain more comprehensive data."

U.S. Seafood Import Monitoring Program

<https://www.federalregister.gov/documents/2016/12/09/2016-29324/magnuson-stevens-fishery-conservation-and-management-act-seafood-import-monitoring-program>

Going into effect January 1st 2018, the U.S. Seafood Import Monitoring Program (SIMP) will apply to seafood products comprised of species that the Presidential Task Force for Combatting Illegal, Unreported, and Unregulated Fishing and Seafood Fraud identified as 'at-risk' of IUU fishing and fraud. SIMP is the initial phase of a national seafood traceability plan, establishing permitting, data collection, and data recordkeeping requirements that will apply to these at-risk products entering U.S. commerce (see below). This initial list could be expanded in the future to include all seafood species. Additional information on the origin of 'at risk' products will be required of seafood importers only as domestic fisheries already collect the information required by the Program. Under SIMP, importers will be required to electronically enter data about the harvest, landing, and identity of products into the International Trade Data System (ITDS), an online government database. The rule also requires chain of custody records be sufficient to trace product from entry into U.S. commerce back to the point of harvest.

Identified at-risk species:

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

** Data collection for abalone and shrimp is on indefinite hold pending additional U.S. regulation*



Information to be collected about harvesting or producing entity:

- Name and flag state of harvesting vessel(s)
- Evidence of authorization to fish (permit or license number)
- Unique vessel identifier (when available)
- Type(s) of fishing gear
 - *Note from [NOAA's SIMP Fact Sheet](#): "The fishing area and type of fishing gear 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 Food and Agriculture Organization fishing area and gear codes should be used."*

Information to be collected about harvesting event:

- Species of fish – Scientific name/Acceptable market name ([ASFIS 3-alpha code](#))
- Harvest date(s)
- Product form(s) at time of landing – including quantity and weight of product
- Area(s) of wild-capture or aquaculture harvest
- Point(s) of first landing
- Name of entity(ies) to which the fish was landed or delivered
 - *Note from [NOAA's SIMP Fact Sheet](#): "In cases where entries and products comprise more than one harvest event, each event that is relevant to a shipment must be reported but the importer does not need to link each event to a particular fish or portion of the shipment."*

Information to be collected about importer of record:

- Name, affiliation, and contact information
- NOAA Fisheries issued international fisheries trade permit (IFTP) number
- Importer of record is responsible for keeping records regarding the chain of custody detailed above
- Information on any transshipment of product (declarations by harvesting/carrier vessels, bills of lading)
- Records on processing, re-processing, and co-mingling of product

Voluntary Guidelines for Catch Documentation Schemes

<http://www.fao.org/fi/static-media/MeetingDocuments/CDS/TC2016/wpAnnex.pdf>

In April 2017, a set of draft Voluntary Guidelines for Catch Documentation Schemes was unanimously adopted by a FAO technical consultation. The draft Guidelines are now poised for adoption by all FAO members at the FAO bi-annual governing conference scheduled for July 2017. The Voluntary Guidelines for Catch Documentation Schemes (CDS) cover CDS for wild capture fish caught for commercial purposes in marine or inland areas, whether processed or not. The objective of the Guidelines is to provide assistance to states, regional fisheries management organizations, regional economic integration organizations and other intergovernmental organizations when developing and implementing new CDS, or harmonizing or reviewing existing CDS.



These guidelines were proposed by a FAO technical consultation April 2017 and are subject to conference approval.

Core elements:

- Unique and secure identification of document
- Information on catch and landing (fishing vessel or vessel group (SSF), species, catch area, landing information, etc.)
- Transshipment at sea or in port, as appropriate (donor and receiving vessel, area, date)
- Description of exported product(s) (product type, weight)
- Issuing Authority validating the catch certificate, including contact details
- Exporter identity and contact details
- Importer identify and contact details
- Export and transport details

Elements unique to re-export and processing:

- Link to originating catch certificate
- Description of imported product(s)
- Description of re-exported or processed product(s)
- Issuing Authority validating the re-export or processing statement, as appropriate, including contact details

Industry

Grocery Manufacturers Association Food Supply Chain Handbook

http://www.gmaonline.org/downloads/technical-guidance-and-tools/GMA_SupplyChain2.pdf

The Grocery Manufacturers Association (GMA) Food Supply Chain Handbook was developed for ingredient suppliers and service providers to the food industry in the U.S, with the focus on meeting U.S. regulatory requirements (the report is not seafood specific). Suppliers may find it necessary to issue timely documentation to customers to maintain food safety programs. Common documents requested by customers are a Letter of Guarantee (LOG), also known as a Continuing Commodity Guarantee, a Certificate of Analysis (COA), and a Certificate of Compliance (COC). A COAs address major analytical parameters for specific foods or lots contained in a specific shipment, or other analytical information needed by the customer. COAs are often required prior to product arrival at a customer's facility. While requirements depend on the material involved,



specifications, site-specific procedures, and specific customers, information included on a COA could include information from the following list.

COA information:

- Full description of the commodity
- Name of supplier
- Lot number(s) for products in the shipment
- Customer's specification number
- Date of production
- Whether testing was done in-house or by an outside lab
- Date product was shipped
- Quantity of product covered by the COA (e.g. 40 cases at 70 lbs. each)
- The specification to be met
- Results of chemical, physical, and/or microbiological analyses
- Methods of analysis
- Descriptions of sampling plans used to generate results contained on the Certificate of Analysis
- Signature of analyst or person issuing the COA

International Seafood Sustainability Foundation Conservation Measure for Traceability & Data Collection

<http://iss-foundation.org/knowledge-tools/publications-presentations/conservation-measures-commitments/>

The International Seafood Sustainability Foundation (ISSF) is a global partnership among scientists, the tuna industry and the environmental non-governmental community whose mission is to undertake science-based initiatives for the long-term conservation and sustainable use of tuna stocks, reducing bycatch and promoting ecosystem health. ISSF had adopted eight conservation measures and a number of supporting commitments to facilitate this mission. Companies that join ISSF must commit to conform to these various measures. One of these conservation measures is Traceability & Data Collection, which includes commitments to 'Product Traceability', 'Quarterly Data Submission to RFMOs', and 'Product Labeling by Species and Area of Capture'. The data requirements for each of these commitments are outlined below, and applies to "processors, traders, importers, transporters, marketers, and others involved in the seafood industry."

Product Traceability Commitment:

<http://iss-foundation.org/knowledge-tools/publications-presentations/conservation-measures-commitments/traceability-data-collection-2-1-product-traceability/>

- Name of catcher and transshipment vessels
- Flag of catcher and transshipment vessels
- Unique Vessel Identifier (UVI) of catcher and transshipment vessels



- Species
- Each species by weight
- Ocean of capture corresponding to tuna RFMO area
- Fishing trip dates
- Fishing gear employed
- Date the company took ownership of the fish

Quarterly Data Submission to RFMO Commitment:

<http://iss-foundation.org/knowledge-tools/publications-presentations/conservation-measures-commitments/traceability-data-collection-2-2-quarterly-data-submission-to-rfmo/>

1. Round fish (includes gilled and gutted, and headed and gilled and gutted) unloading from Fishing Vessel

- Name of fishing vessel
- UVI number of fishing vessel
- Gear type
- Flag State of fishing vessel
- Start date for unloading to processor
- End date for unloading to processor
- RFMO area of subject catch
- Fishing trip dates
- Weight of catch (in metric tons, by commercial species/size categories compiled as specified in [paragraph 2](#))
- Unloading port
- Data source (unloading data, outturn report or immediate pre-processing)

2. Round fish (includes gilled and gutted) unloading from Carrier Vessel (Transshipments)

- Name of carrier vessel
- UVI number of carrier vessel
- Flag State of carrier vessel
- UVI number of catcher vessel
- Start date for unloading to processor
- End date for unloading to processor
- Name of catcher vessel(s)
- UVI number of catcher vessel(s)
- Date(s) of transfer of fish from catcher vessel(s) by vessel, and/or transfer from processor(s) to carrier vessel
- Locations of transfer(s) at sea [at sea coordinates/port name] by transfer
- Fishing trip dates
- Weight of catch (in metric tons, by commercial species/size categories by catcher vessel(s) compiled from immediate pre-processing data as specified in [paragraph 2](#))
- Unloading port



- Data source (unloading data, outturn report or immediate pre-processing)

Product Labeling by Species and Area of Capture Commitment:

<http://iss-foundation.org/what-we-do/commitments-compliance/conservation-measures-commitments/traceability-data-collection-2-3-product-labeling-by-species-and-area-of-capture/>

- All species of tuna contained in product
- Ocean of capture for the tuna contained in the product
- (For an ISSF Participating Company, this measure applies only to the branded products of that company)

National Fisheries Institute Traceability Working Group's KDEs to Identify Seafood Sources Proposal

https://www.fishwise.org/images/pdfs/2015.03.12_Summary_Seafood%20Summit%20Traceability%20Workshop.pdf

At the 2015 SeaWeb Seafood Summit, the National Fisheries Institute (NFI) Traceability Working Group presented its *KDEs to Identify Seafood Sources* proposal during the pre-conference workshop. The workshop provided an opportunity for seafood industry representatives and other stakeholders to provide feedback on the proposal, and to discuss opportunities to align on KDEs. The goals of the project included determining which KDEs to identify seafood sources should be communicated throughout seafood supply chains as well as identifying existing standardized reference lists for companies to use when responding to KDE requests.

KDEs:

- Latin Species Name
- Production Method
 - [Wild Catch Method](#): FAO parent gear type + FAO sub-method + specific gear type (TBD)
 - Farmed Production Method: [FAO technique + FAO system + FAO environment](#)
- Fishery Location
 - FAO Major Fishing Area + country of harvest (if caught within EEZ)
 - FAO Major Fishing Area + flag of vessel + RFMO Name or high seas-ocean designation
- Farming Location
 - Country of farming
 - Management zone (TBD)



Seafood Task Force

<http://www.seafoodtaskforce.global/>

Established in July 2014, the Seafood Task Force – formerly known as the Shrimp Sustainable Supply Chain Task Force – is an international industry-led coalition whose membership includes major European and American retailers, suppliers, and major Thai seafood companies. The Task Force aims to drive measurable social and environmental change in the Thai seafood industry through greater supply chain accountability, verification and transparency. The Task Force is operating under three core objectives: implementing track and trace systems, creating codes of conduct, and assisting with Fisheries Improvement Projects (FIPS). Specific details of the Task Force’s trace and track systems are not public at this time. FishWise will update this report when additional information has been released.

Traceability for Seafood U.S. Implementation Guide

http://www.aboutseafood.com/sites/all/files/FINAL%20Seafood%20Trace%20Guide_v1.1.pdf

The National Fisheries Institute (NFI), in association with GS1, created an implementation guide to ensure effective practices are in place across complex global supply chains and to aid in the adoption of consistent business practices to effectively manage traceability for the seafood industry. The guide recommends an additional voluntary approach (beyond the Bioterrorism Act requirements of 2002 and the Food Safety Modernization Act of 2010) in best practices for identifying and tracking of seafood from farm or vessel to point of sale.

KDEs for traceability of product movement in the supply chain (organized by Critical Tracking Event):

- Product receipt
 - Unique identification of shipment linked to unique product identification
 - Date received
 - Origin of product
- Product ingredient
 - Unique identification of ingredient
 - Batch/lot number or serial number
- Product creation
 - Unique identification of product
 - Batch/lot number or serial number
- Product shipping
 - Unique identification of shipment linked to unique product identification
 - Date shipped
 - Shipment destination
- Pallet configuration



- Unique shipment ID
- Unique product ID aggregation
- Batch/lot number or serial number
- Quantity
- Consumer unit depletion and/or point of sale
 - Unique product ID
 - Batch/lot number link
 - Date purchased
 - Quantity

Consumer item traceability data elements:

- Brand owner/company name
- Consumer item product description
- Lot number as defined
- GTIN **or** (store) item identification number
- Best-before-date or sell-by-date or use-by-date or production-date
 - “Seafood industry terminology is Lot Code/Date Code”

Minimum requirements for case traceability:

- Same KDEs as listed in “GS1 Foundation for Fish, Seafood, and Aquaculture Traceability Implementation Guideline” above

Requirements for pallet traceability:

- Same KDEs as listed in “GS1 Foundation for Fish, Seafood, and Aquaculture Traceability Implementation Guideline” above

Maintaining traceability for product from live seafood providers:

- Same KDEs as listed in “GS1 Foundation for Fish, Seafood, and Aquaculture Traceability Implementation Guideline” above
- NSSP tag for live shell stock

Initiating a recall request (must communicate at least the product identification and as much of the additional information listed below when available):

- Product identification or an attribute of the product
- Lot or batch codes
- Trading partners affected
- Location of the product
- Delivery date/time period
- Quantity

Logistics information suppliers must provide for all recalls:

- Name, address, and telephone number of the shipper
- Name, address, and telephone number of the transporting company



- Delivery location, on a facility by facility basis
- GTIN's, brand & item description, carton/case configuration and lot number(s) of each product
- Total logistics units delivered to each location
- Delivery date, and if available, delivery time and dock door

Human readable information typically provided for each type of product recall at the case or consumer item level:

- Supplier company name
- Supplier product number or item code
- Case-level product description
- USDA Establishment Number and/or FDA Facility Registration Number, when required
- Date information

Non-Governmental Organizations

An Advisory Note for the UK Supply Chain on How to Avoid Illegal, Unreported, and Unregulated (IUU) Fishery Products

<http://ejfoundation.org/sites/default/files/public/EJF-Advisory-Note-low-res-final.pdf>

The Advisory Note was produced in 2015 by the British Retail Consortium (BRC) and the Environmental Justice Foundation (EJF) in collaboration with the World Wildlife Fund-UK (WWF-UK). The Advisory Note is meant for UK retailers and brands buying and selling seafood to help inform them of the risks associated with IUU fishing, with the goal to prevent IUU products from entering UK's seafood supply chains. The document is primarily concerned with the legality of fishery supply chains and applies to fishery products within the scope of the EU's Regulation to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing (Council Regulation No 1005/2008). The Advisory Note outlines a due diligence approach for use in industrial fishing operations, including examples of basic information to collect for each fishery product regarding the nature of the fishery and how it is being managed the State and industry.

Examples of information to collect on fisheries:

- Range and location of fishery – fish/seafood species; stock (including commercial by-catch and unwanted TEP by-catch)
- Catch – FAO (or ICES) catch area, catch method
- Fleet structure/capacity – number of vessels, type of fleet (size of vessels, complexity/length of supply chain)



Examples of information to collect on vessels:

- Vessel name, owner and flag State
- UVI (Phase 1: IMO number if over 100GT)
- Registration number
- Skipper/fisherman license

Examples of information to request on flag States:

- List of flagged vessels, including flag State, registration number, license and UVI
- Type of State fishery controls in place – quota/effort
- State system of licensing and registration, including renewal
- MCS systems in place – VMS, port sampling, observer coverage, use of logbooks
- Record for maintenance of fishing and related log books
- Name of State authorizing transshipment licenses
- Catch and transshipment reports (aggregated according to areas and species)

Examples of information to request on coastal States:

- Lists of vessels registered by coastal State
- Information about system of registration, including renewal
- Information on MCS system in place – VMS, port sampling, observer coverage, use of logbooks, etc.
- License verification records (e.g. audits, certifications)
- List of transshipments occurring within EEZ, including vessels involved and date and location of all occurring areas

Examples of information to request on transshipments:

- List of vessels involved in transshipments including carrier vessel (basic vessel information, flag State, registration number, license, UVI)
- Details of transshipment: date, area (port or sea), position
- Information on observer program, including number of inspections, percentage conducted at random, and independent observer report

Examples of information to collect on port States:

- Port of landing and port State
- Port landing procedures and controls
- Port registration and inspection records
- Status on ratification of PSMA and reference for national interpretation of PSMA

Examples of information to request on traceability:

- Goods receipt documentation traceability/batch code
- Traceability records – for product received back to catch vessel (or group of vessels)
- Product specifications
- Systems in place to verify legality at level of processing



- Mass balance reconciliation

Conservation Alliance for Seafood Solutions Common Vision for Sustainable Seafood

<http://www.solutionsforseafood.org/wp-content/uploads/2014/10/A-Common-Vision-for-Sustainable-Seafood.pdf>

In 2008, the Conservation Alliance for Seafood Solutions – a coalition of NGOs working to improve the sustainability of seafood in North America – released a Common Vision for Sustainable Seafood presenting six steps companies can take to develop and implement a sustainable seafood policy. The updated version, released in 2016, includes an initial list of “basic information” companies should collect and monitor about products, as well as “additional important information” to support specific traceability, risk assessment, and improvement efforts.

Basic information to collect and monitor includes, but is not limited to :

- Species common and scientific (Latin) names
- Volume of product purchased
- Whether product is rated or certified
- Name of supplier
- Fishery location (if within EEZ): [FAO Major Fishing Area](#) + country EEZ
- Fishery location (if outside EEZ): FAO Major Fishing Area + flag of vessel + RFMO or high seas name
- Farming Location: Country of farming
- Wild-caught or farmed designation
- Fishing methods or aquaculture production methods used (e.g., [FAO Fishing Gear type](#), [FAO National Aquaculture Sector Overview maps collection](#))

Additional important information to support specific efforts:

- Producer/processor names
- Flag state and unique identification number of vessel (IMO number when possible)
- Catch certificate and/or fishing vessel license
- Name of fishing vessel(s), and if transshipment at port or at sea occurred, the identifying information of the vessels involved in the exchange
- Quantities of product at time of harvesting/production, landing (if wild-caught), and processing
- Unique identifiers (e.g. lot numbers, batch codes, serial numbers, etc.)
- For aquaculture: Details on feed sources, including the basic information listed above for all wild inputs to the feed
- Name of fishery improvement project or aquaculture improvement project
- Products and/or supply chains at high risk for illegal, unregulated, and unreported fishing or human rights and labor abuses, including:



- [Trafficking in Persons tier](#) for the country where the product is harvested and processed
- For wild-capture: IUU status of the country where the product was harvested
- For aquaculture: Name and GPS location of farms
- For wild-capture: Port/location of landing and vessel satellite tracking records
- Country of origin labeling (see [United States Department of Agriculture rules](#))
- Date(s) of fishing or aquaculture production
- Date(s) of landing (and transshipment if applicable)
- Date(s) of processing
- Worker manifest at sea
- Duration of work at sea between returns to port
- Contract provisions, including hours and conditions of work, payment, and deduction protocols
- Labor recruitment channels (e.g. government or private, and if private, names of the private recruitment agencies/brokers)
- Third-party validator or auditor of worker information
- Direct reports from workers before and after they are at sea through confidential interviews and grievance mechanisms that include protections against reprisals

Verité Seafood Compliance Tool: Mapping the Seafood Supply Chain

http://www.responsiblesourcingtool.org/download/seafood/SF_Tool_01.pdf

Verité is a U.S. based nonprofit consulting, training, research, and advocacy organization which provides companies and their suppliers information and tools to address human rights abuses including child labor, forced labor, and human trafficking. Verité provides a collection of compliance tools for the seafood industry to assess and address the risk of human rights violations within seafood product supply chains. This tool can help identify information to collect from suppliers during a risk assessment. The social responsibility components of Verité's Seafood Compliance Code can be found in FishWise's "[Social Responsibility Information for Seafood Supply Chains](#): A Compilation of Resources."

Land-based supplier profile information:

- Supplier name
- Supplier address
- Type of Product
- Number of workers employed
- Number of workers hired via labor brokers
- Seasonality of production

Sea-based supplier profile information:

- Supplier Name
- Vessel Names



- For each vessel in fleet:
 - Unique Vessel IDs, if available
 - Name and address of vessel owner
 - Name and address of vessel captain
 - Vessel license and registration information
 - Vessel flag state
 - Vessel port of call
 - Operating fishery
 - Type of product supplied
 - Size of vessel
 - Gear used on vessel
 - Typical number of workers hired
 - Seasonality of production
 - Duration of typical voyage
 - Use of transshipment at sea

World Wildlife Fund Traceability Principles for Wild-Caught Fish Products

http://assets.worldwildlife.org/publications/796/files/original/WWF_Traceability_Principles_for_Wild-Caught_Fish_April_2015.pdf?1430410438&_ga=1.180880551.1802788624.1477355764

The World Wildlife Fund (WWF) Traceability Principles for Wild-Caught Fish Products, first released in 2015, outlines WWF's best practice recommendations for seafood traceability standards to increase supply chain transparency and combat IUU wild-caught fish products. The six traceability principles are intended as goal statements and provide a basic framework for the effectiveness and successful implementation of traceability systems for wild-caught fish product supply chains. Principle 1 outlines the essential information to be collected and associated with products during the fishing operation and upon first landing.

Principle 1 – Essential Information

- Vessel identity and registration
- Identity of vessel owner/operator (including beneficial owner)
- Location of catch (e.g. GPS coordinates or specific location of fishery)
- Authorization to fish (permits, licenses, etc.)
- Species and product name
- Fishing method used
- Date and time of fishing
- Quantities of target and non-target catch and discards
- Habitat impacts if relevant (e.g. bottom trawl fisheries)
- Location, date, time, and specifics of any at sea transfer
- Transformation of fish prior to landing (at-sea processing, co-mingling, segregation, aggregation, etc.)



- Location, date, and time of landing and volumes landed
- Person/enterprise with custody and ownership after transfer
- Other compliance data if required by law:
 - Applicable catch documentation
 - Reporting requirements for species and quantities of non-target catch and discards, habitat impacts, etc.
 - Monitoring techniques and practices employed (Observers, CCTV, etc.)

Technical Experts

Assessing the Value and Role of Seafood Traceability from an Entire Value-Chain Perspective

<http://onlinelibrary.wiley.com/doi/10.1111/1541-4337.12130/full>

Produced by the Institute for Food Technologists (IFT) Global Food Traceability Center (GFTC), the purpose of this study was to gain insights and provide knowledge about the impact of traceability on improving seafood industry business performance. The traceability practices and systems of 48 separate seafood businesses were assessed as part of GFTC's evaluation of 9 global seafood value chains. In addition, the report identifies the business case for traceability among businesses in the global seafood industry, as well as the attributes of specific seafood species and products that have the greatest influence on consumer purchasing decisions.

Note: The report does not recommend specific KDEs. As part of the value-chain analysis conducted by GFTC for this study, the report includes "chain maps" of KDEs and associated Critical Tracking Events (CTEs) for 8 different supply chains (different geographies and products). See Appendix D of the report for the unique sets of KDEs associated with each chain map.

Expert Panel on Legal and Traceable Wild Fish Products

http://solutions-network.org/site-legaltraceablefish/files/2015/03/EPLAT_FinalReport_March2015_Webview.pdf

Created by a multi-disciplinary group of NGOs, industry, and academics, the Expert Panel on Legal and Traceable Wild Fish Products (EPLAT), convened to promote a global framework for ensuring legality and



traceability of wild-caught fish products. This reference document, released in March 2015, defines best practice for the minimum information that should be collected to ensure legality and sustainability of wild-caught fish products. Along with eight concrete recommendations given by the Panel, the report includes an appendix of sample KDEs, based on six Critical Tracking Events (CTEs) in the supply chain, relevant for documenting legally caught and landed fish and relating to critical tracking events in seafood production and trade. The six CTEs outlined in the appendix include: fishing; bycatch; at-sea transfer – shipping; at-sea transfer – receiving; landing – shipping; and landing – receiving.

KDEs

- Event owner (same for the following CTEs: fishing, bycatch, at-sea transfer shipping, at-sea transfer receiving, and landing-shipping)
 - Nationality
 - Name
 - Registration details
 - Captain
 - Type
 - Ownership
 - Home port
- Event owner for landing-receiving
 - Identity of the persons or enterprises to whom legal and physical custody of the fish is transferred upon landing
- Trading partner for fishing
 - Identity of the inter-governmental authority
- Trading partner for by-catch (N/A)
- Trading partner (same for the following CTEs: at-sea transfer shipping, at-sea transfer receiving, and landing-receiving)
 - Nationality
 - Name
 - Registration details
 - Captain
 - Type
 - Ownership
 - Home port
- Trading partner for landing-shipping
 - Identity of the persons or enterprises to whom legal and physical custody of the fish is transferred upon landing
- Fish item (same for the following CTEs: fishing, at-sea transfer shipping, at-sea transfer receiving, landing-shipping, and landing-receiving)
 - Species, stock, size
- Fish item (for bycatch)
 - Species, stock of bycatch
- Unique identifier
 - Catch certificate/license (same for all CTEs)



- Quantity of fish or bycatch (applicable to all CTEs)
- Unit of measure
 - Variable (same for all CTEs)
- Date/Time (applicable to all CTEs)
- Location (applicable to all CTEs)

**See Appendix A on pg. 52 of report for examples of 'linking KDEs'*

A Guidance Document on the Best Practices in Food Traceability

<http://onlinelibrary.wiley.com/doi/10.1111/1541-4337.12103/abstract>

Produced by Global Food Traceability Center (GFTC), this guidance document presents food traceability best practices guidance and it addresses the unknowns and gaps in understanding and the broad applicability of a Critical Tracking Event (CTE)-Key Data Element (KDE) framework. In this paper, GFTC applies the CTE-KDE framework to six different food sectors, including seafood. The guidance document is intended for regulatory agencies when developing regulations and/or guidance applicable to most foods, as well as industry who will find the minimum criteria that are necessary to manage a proper food traceability system. The document is intended to serve as a step toward consistent baseline requirements for food traceability.

The below KDEs were taken from the 'Seafood supply chain' example in the report. To see the KDEs associated with the 5 other supply chain examples, please refer to the full report.

Requirements for shipment traceability for seafood:

- Batch/lot or serial numbers
- Unique identifier (such as a GTIN in a GS1 system)
- Quantity shipped
- Shipping date
- Receiving dates
- Ship from and destination locations

Other useful information may be included as appropriate for recordkeeping:

- Stock Keeping Unit (SKU) or other supplier product identification reference
- Production date, if product is for retail store-processing or food service use
- Catch date or sell-by date or best-by-date, if applicable
- Labeling and tracing of regulatory requirements for the producer, copacker, or product seller (e.g. USDA Establishment Number, USDA Country-of-Origin Labelling Statement, ISO Country Number, etc.)
- Labelling for credence attributes (e.g. USDA labelling for wild-caught or farm-raised, halal or kosher certification, organic or sustainability logos)

Maintaining traceability for product from live seafood providers:



- Product identity
- Accurate farm/vessel information depending on species of the seafood received (such as FAO area and alpha code)
- PO number of live receiving ticket of received seafood
- Date of shipment and receipt
- Carrier name and trailer number
- Natl. Shellfish Sanitation Program (NSSP) tag for live shell stock
- Catch certificate (EU requirement)
- Quantity

Project to Develop an Interoperable Seafood Traceability Technology Architecture: Issues Brief

<http://onlinelibrary.wiley.com/doi/10.1111/1541-4337.12187/abstract>

Produced by Global Food Traceability Center as part of their ongoing seafood traceability project, these KDEs were defined through the publication of a scholarly article released in early 2016 designed to discuss various industry challenges to effective seafood traceability, and put forth a broader traceability architecture framework to enable global interoperable traceability. The Brief differentiates seafood KDEs into “importance rankings” – those that are essential for traceability and should be exchanged between trading partners (A), those that are essential for traceability but need only be collected for internal purposes and be available upon request (B), and those that are optional for value-added purposes (C). Some KDEs were identified as relevant to more than one ranking. The rankings, as outlined in the report, are indicated below for each KDE.

KDEs for wild harvest:

- Latin species name (A)
- Common or market name (A, C)
- Catch location (A, B, C)
 - FAO major fishing zone (A)
 - Country of catch (A)
 - Region (A)
 - Management authority (A)
 - Stock (A)
- Landing date (B, C)
- Time of harvest
- Vessel info
 - Flag of fishing vessel (B)
 - Name of fishing vessel (A, B, C)
 - Captain name (B)
 - Home port (B, C)



- IMO (A, B)
- Fishing method (A, C)
- Total weight of catch (B)
- Certification status and chain of custody code (B, C)

KDEs for farm raised:

- Farmed location
 - Farm name or processor name (A, B)
 - Country of farming (A)
 - Region of farming (or address) (A, B, C)
 - GPS coordinates (B, C)
- Country of origin labeling (COOL) (A)
- Production method (A)
- Fishmeal KDEs (C)
- Feed company name (B)
- Feed ingredients (B, C)
- Hatchery name (B)
- Source information for wild fish feed (A)
- Catch area (A)
- Flag of fishing vessel (B)
- Name of fishing vessel (B)
- Fishing gear (A)

KDEs for retained bycatch:

- Species (A)
- Stock (C)
- Size of bycatch (B)
- Quantity of bycatch (B)
- Date and time of bycatch (B, C)
- Location of bycatch (A)
- Catch Certificate/License (A)

KDEs for transshipment:

- Was the product transshipped? (A)
- Tonnage transshipment (B, C)
- IMO number of catch vessel and carrier (B, C)
- Identity of receiving and shipping vessels (A, B)
- Date and time of transfer (A, B)
- Location of transfer (A, B)
- Species or common name (A, B)
- Quantity (A, B)
- Lot, batch, or shipment number (A, B)



KDEs for port/landing:

- Location landed (A, B)
- Date landed (B)
- Identity of vessel (A)
- Event owner (A, B)
- Species, stock, size (A)
- Catch certificate of license number (B)
- Quantity of fish (B)

KDEs for primary and secondary processing:

- Species (A)
- Dates and time received (A, B, C)
- Location received (A, B)
- Weight (A)
- Lot number (A)
- Batch code (A)
- Dates and time shipped (A, B)
- Name of processor/packing plant (A)
- Pallet identifier (A)
- Supplier (B)
- Customer (B)

KDEs for distribution:

- Product (A)
- Weight (A, B)
- Container/seal number (A, B)
- Pallet identifier (A, B)
- Lot number/batch number/serial number (A)
- Pallet identifier (A, B)
- Dispatch date (A, B)
- Receiving date (A, B)
- Transport companies (A, B)
- GTIN code/UPC code (A)
- Quantities (A)

