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Title: **New work item proposal: Traceability of fishery products
- Specification on the information to be recorded in
farmed fish distribution chains**

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NEW WORK ITEM PROPOSAL	
Date of presentation 2008-06-09	Reference number (to be given by the Secretariat)
Proposer Norway	ISO/TC 234 / SC N 027
Secretariat Standards Norway	

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee with a copy to the Central Secretariat and, in the case of a subcommittee, a copy to the secretariat of the parent technical committee. Proposals not within the scope of an existing committee shall be submitted to the secretariat of the ISO Technical Management Board.

The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, or organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

See overleaf for guidance on when to use this form.

IMPORTANT NOTE: Proposals without adequate justification risk rejection or referral to originator.

Guidelines for proposing and justifying a new work item are given overleaf.

Proposal (to be completed by the proposer)

<p>Title of proposal (in the case of an amendment, revision or a new part of an existing document, show the reference number and current title)</p> <p>English title Traceability of fishery products - Specification of the information to be recorded in farmed fish distribution chains</p> <p>French title (if available)</p>	
<p>Scope of proposed project</p> <p>To develop a standard that specify the information to be recorded in distribution chains in order to establish the traceability of farmed fishery products.</p> <p>It should specify how fishery products traded 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.</p> <p>It should be applicable to the distribution for human consumption of farmed finfish and their products, from breeding through to retailers or caterers. It should also specify data about ingredients brought in by processors and producers.</p>	
<p>Concerns known patented items (see ISO/IEC Directives Part 1 for important guidance)</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes", provide full information as annex</p>	
<p>Envisaged publication type (indicate one of the following, if possible)</p> <p><input checked="" type="checkbox"/> International Standard <input type="checkbox"/> Technical Specification <input type="checkbox"/> Publicly Available Specification <input type="checkbox"/> Technical Report</p>	
<p>Purpose and justification (attach a separate page as annex, if necessary)</p> <p>The proposed project shall specify the information to be recorded in distribution chains for farmed fish and farmed fish products from in order to establish traceability of seafood products. It is expected to be relevant and beneficial with respect to:</p> <ul style="list-style-type: none"> -improved food safety. Traceability is a key component in a food safety system, through documentation of product properties -improved documentation and transparency for legislative requirements -improved opportunities for commercial use -labour/cost reduction by reduced administration -improved information exchange in order optimise production processes. -reduced possibilities for trade conflicts or legal conflicts <p>The ISO standard 22005 gives general principles and basic requirements for system design and implementation. It is generic and gives no specific requirements for identification of units and how to handle splitting and merging of product units. The proposed standard should give such requirements.</p> <p>To facilitate chain traceability and transparency, a standard which specifies how to name 'objects' (companies, places, food items) and 'attributes' (product and process properties) is needed. The aim of the proposal is to develop a standard for the fish and seafood industry. It would be difficult to envisage such a standard being developed for food products in general; the parameter lists alone would be massive. Therefore the development of the proposed standard should be convened by ISO/TC 234 Fisheries and Aquaculture and not ISO/TC 34 - Food products.</p>	
<p>Target date for availability (date by which publication is considered to be necessary) 2011.12.01</p>	

New work item proposal

Proposed development track <input type="checkbox"/> 1 (24 months) <input checked="" type="checkbox"/> 2 (36 months - default) <input type="checkbox"/> 3 (48 months)		
Relevant documents to be considered CWA 14659 Traceability of fishery products — Specification on the information to be recorded in farmed fish distribution chains CWA 14660 Traceability of fishery products — Specification of the information to be recorded in captured fish distribution chains ISO 22005 Traceability in the feed and food chain -- General principles and basic requirements for system design and implementation		
Relationship of project to activities of other international bodies		
Liaison organizations	Need for coordination with: <input type="checkbox"/> IEC <input type="checkbox"/> CEN <input type="checkbox"/> Other (please specify)	
Preparatory work (at a minimum an outline should be included with the proposal) <input checked="" type="checkbox"/> A draft is attached <input type="checkbox"/> An outline is attached. It is possible to supply a draft by The proposer or the proposer's organization is prepared to undertake the preparatory work required <input type="checkbox"/> Yes <input type="checkbox"/> No		
Proposed Project Leader (name and address) Petter Olsen Norwegian Institute of Fisheries and Aquaculture	Name and signature of the Proposer (include contact information) Rolf Duus Standards Norway E-mail: rdu@standard.no	
Comments of the TC or SC Secretariat Supplementary information relating to the proposal <input checked="" type="checkbox"/> This proposal relates to a new ISO document; <input type="checkbox"/> This proposal relates to the amendment/revision of an existing ISO document; <input type="checkbox"/> This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item; <input type="checkbox"/> This proposal relates to the re-establishment of a cancelled project as an active project. Other:		
Voting information The ballot associated with this proposal comprises a vote on: <input checked="" type="checkbox"/> Adoption of the proposal as a new project <input type="checkbox"/> Adoption of the associated draft as a committee draft (CD) <input type="checkbox"/> Adoption of the associated draft for submission for the enquiry vote (DIS or equivalent) Other:		
Annex(es) are included with this proposal (give details) <input checked="" type="checkbox"/>		
Date of circulation 2008-06-09	Closing date for voting 2008-09-09	Signature of the TC or SC Secretary Rolf Duus

Use this form to propose:

- a) a new ISO document (including a new part to an existing document), or the amendment/revision of an existing ISO document;
- b) the establishment as an active project of a preliminary work item, or the re-establishment of a cancelled project;
- c) the change in the type of an existing document, e.g. conversion of a Technical Specification into an International Standard.

This form is not intended for use to propose an action following a systematic review - use ISO Form 21 for that purpose.

Proposals for correction (i.e. proposals for a Technical Corrigendum) should be submitted in writing directly to the secretariat concerned.

Guidelines on the completion of a proposal for a new work item

(see also the ISO/IEC Directives Part 1)

a) Title: Indicate the subject of the proposed new work item.

New work item proposal

b) Scope: Give a clear indication of the coverage of the proposed new work item. Indicate, for example, if this is a proposal for a new document, or a proposed change (amendment/revision). It is often helpful to indicate what is not covered (exclusions).

c) Envisaged publication type: Details of the types of ISO deliverable available are given in the ISO/IEC Directives, Part 1 and/or the associated ISO Supplement.

d) Purpose and justification: Give details based on a critical study of the following elements wherever practicable. *Wherever possible reference should be made to information contained in the related TC Business Plan.*

1) The specific aims and reason for the standardization activity, with particular emphasis on the aspects of standardization to be covered, the problems it is expected to solve or the difficulties it is intended to overcome.

2) The main interests that might benefit from or be affected by the activity, such as industry, consumers, trade, governments, distributors.

3) Feasibility of the activity: Are there factors that could hinder the successful establishment or global application of the standard?

4) Timeliness of the standard to be produced: Is the technology reasonably stabilized? If not, how much time is likely to be available before advances in technology may render the proposed standard outdated? Is the proposed standard required as a basis for the future development of the technology in question?

5) Urgency of the activity, considering the needs of other fields or organizations. Indicate target date and, when a series of standards is proposed, suggest priorities.

6) The benefits to be gained by the implementation of the proposed standard; alternatively, the loss or disadvantage(s) if no standard is established within a reasonable time. Data such as product volume or value of trade should be included and quantified.

7) If the standardization activity is, or is likely to be, the subject of regulations or to require the harmonization of existing regulations, this should be indicated.

If a series of new work items is proposed having a common purpose and justification, a common proposal may be drafted including all elements to be clarified and enumerating the titles and scopes of each individual item.

e) Relevant documents and their effects on global relevancy: List any known relevant documents (such as standards and regulations), regardless of their source. When the proposer considers that an existing well-established document may be acceptable as a standard (with or without amendment), indicate this with appropriate justification and attach a copy to the proposal.

f) Cooperation and liaison: List relevant organizations or bodies with which cooperation and liaison should exist.

Draft proposal - Traceability of fishery products - Specification on the information to be recorded in captured fish distribution chains

Introduction

There are increasing demands for detailed information on the nature and origin of food products. Traceability is becoming a legal and commercial necessity. Transmission of all the required information physically with the products would, in many instances, be impracticable and so the use of information technology is preferable.

The ISO definition of traceability concerns the ability to trace the history, application and location of that which is under consideration, and for products this can include the origin of materials and parts and processing history. Traceability includes not only the principal requirement to be able to physically trace products through the distribution chain, from origin to destination and vice versa, but also to be able to provide information on what they are made of and what has happened to them. These further aspects of traceability are important in relation to food safety, quality and labelling.

The key to the operation of the scheme is the labelling of each unit of goods traded, whether of raw materials or finished products, with a unique ID. This is to be done by the food business that creates each unit. Businesses that transform units, such as processors who convert the units of raw materials received into the products dispatched, create new units and must give them new IDs.

Each of the food businesses that create or physically trade in those units, throughout the distribution chains from catcher or farmer through to retailer or caterer, are to generate and hold the information necessary for traceability. The information is to be held on computer databases, keyed to the unit IDs.

The information remains in the ownership of the food business that generated it but is available when required by law for the purposes of traceability (in the event of a food safety problem) or by commercial agreement between businesses. The means of communicating the information is standardised so that it can be readily accessed from business to business through the distribution chains, when required.

This is a development beyond the forthcoming EU legal requirement, coming into force January 1st 2005, for each food business to independently record sources of supplies and destinations of foods, but builds on that basis.

Commercial arrangements for businesses to communicate information through the distribution chains are to be encouraged, particularly for the information desired by the trade to be *visible* at the various transaction points in the chains, but that is not the subject of this document.

The method of identifying the units of goods traded is based on the EAN.UCC system that is already in use throughout the world. The information is keyed to unique IDs given to the individual trade units (e.g. boxes of fish or cases of products) but the scheme also accommodates trade in logistic units made up of numbers of trade units (e.g. pallets of boxes or cases). Businesses that create logistic units have to label them with a logistic unit ID and also record the IDs of the component trade units.

The Tracefish scheme does not demand perfect traceability, i.e. that a particular retail product should be traceable back to a single vessel or farm and batch of origin, or vice versa from origin to destination. Pragmatically it is recognised that mixing of units is likely to occur at a number of stages in the distribution chains, e.g. in grading at auction markets prior to sale and in the processing of raw materials into products. Where such mixing occurs, the food business is transforming the trade units. The requirement for traceability

CWA 14659:2003 (E)

is that the business records the IDs of the received trade units that may be input to each created trade unit, and vice versa. The particular product is then traceable back to a finite number of vessels or farms and batches of origin, and vice versa.

The information itemised in the specifications for recording by the food businesses includes:

- the fundamental information necessary to identify and physically trace the products, that shall be recorded;
- specific information that is required by law in relation to food safety, quality and labelling, together with important elements of commercially desirable information related to those matters, that should be recorded;
- and further specific and commercial information considered to be of sufficient relevance to be included in the specifications, that may be recorded.

Given the enormous variety of fishery products and of their distribution chains that operate within and between different countries, and varying legal requirements, the information specifications cannot itemise all the information that may possibly be required in every situation. The specifications provide a generic basis for traceability. Flexibility is allowed for businesses to record further information, in their own non-standardised files, but keyed to the unit IDs.

Although virtually every distribution chain is different, they all appear to be made up of a number of characteristic components or *building blocks*. The types of business identified in this document for farmed fish distribution chains are:

- breeders;
- hatcheries;
- fish farms;
- live fish transporters;
- processors;
- transporters and stores;
- retailers;
- fish feed producers.

Any given farmed fish distribution chain may be made up of some or all of these components but not necessarily in the sequence listed.

The information specifications separately tabulate the information to be recorded by each of these types of business. Some businesses may carry out the functions of more than one of the types listed, for example distribution businesses may act as *wholesalers* and as *transporters*, in which case those businesses must record the relevant information requirements for each of the functions carried out.

There are limitations to this approach, for example it does not fit to the specialised requirements of live bivalve mollusc distribution chains, and so this initial information specification is limited in scope to the distribution for fish feed and human consumption of farmed fish and their products. The captured and farmed fish information specifications are substantially the same from processing onward.

Pragmatically it is recognised that some supplies of fish products and supplies of ingredients, etc, will come from outside of the Tracefish domain and may lack the required IDs and information records. To accommodate this, a business that brings in fish and materials from outside of the Tracefish domain is

required to generate and hold the key information necessary for the traceability of the units brought in, and if they are to be traded on, to label those units with the required IDs.

This standard will provide a basis for IT service providers to develop business solutions (applications) for the trade. The information specifications do not preclude the use of paper systems, although the obvious benefits of business efficiency, including rapid communication, will be lost.

Further information on the background to the development of the Tracefish scheme and on its philosophy is given in informative annexes A.

1 Scope

This standard specifies the information to be recorded in distribution chains in order to establish the traceability of farmed fishery products.

It specifies how fishery products traded 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 applicable to the distribution for human consumption of farmed finfish and their products, from breeding through to retailers or caterers. The standard specify also data about ingredients brought in by processors and producers.

2 Normative references

3 Terms and definitions

For the purposes of this **Feil! Fant ikke referansekinden.**, the following terms and definitions apply:

3.1

traceability

ability to trace the history, application or location of that which is under consideration

NOTE when considering products traceability can relate to

the origin of materials and parts;

the processing history.

(ISO 9000:2000)

3.2

trade unit

any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain. This definition covers services and products, all of which may have pre-defined characteristics (2002 General EAN.UCC Specifications Section 2.1.1.1)

3.3

logistic unit

an item of any composition established for transport and/or storage that needs to be managed through the supply chain (2002 General EAN.UCC Specifications Section 2.2.1)

4 Symbols and abbreviations

AI – EAN.UCC system Application Identifier

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EAN – EAN International

EAN.UCC system – Unique global identification system

EFSIS –European Food Safety Inspection Service

FAO – Food and Agricultural Organization of United Nations

GLN– EAN.UCC system Global Location Number

GMP – Good Manufacturing Practice.

GTIN – EAN.UCC system Global Trade Item Number.

GTIN+ – GTIN plus a further number to uniquely identify each particular trade unit (e.g. the production batch and serial number or the date and time of production).

HACCP – Hazard Analysis Critical Control Points.

ID – Identification.

MSC – Marine Stewardship Council

n2 or n14, etc – EAN.UCC identifier numbers consisting of 2 or 14, etc digits

SSCC – EAN.UCC system Serial Shipping Container Code

UCC – Uniform Code Council

5 Information Requirements for Farmed Fish

5.1 The Identification of the units traded

Fishery products shall be traded as uniquely identified and labelled units.

Businesses that create trade units shall identify and label each of them with a GTIN+.

Businesses that create logistic units, made up of numbers of separately identified trade units, shall identify and label each logistic unit with a SSCC.

Businesses that bring in supplies of fishery products from outside of the domain of the Tracefish specifications and trade them onwards, shall identify and label each unit traded onward with the business's own EAN.UCC identifiers as above.

5.2 The recording of information

Businesses that physically trade in fishery products shall generate and hold the required information, appropriate to the type of business, for each of the units traded.

The detailed information requirements are tabulated below as follows:

- for breeders in 5.3;
- for hatcheries in 5.4;
- for fish farms in 5.5;

- for live fish carriers in 5.6
- for processors in 5.7;
- for transporters and storers in 5.8;
- for traders and wholesalers in 5.9;
- for retailers and caterers in 5.10;
- for fish feed production in 5.11;
- and additional requirements for businesses that bring in fish and materials from outside of the Tracefish domain, in 5.12.

Businesses that carry out the functions of more than one of the categories listed above shall record the information relevant to each of the functions carried out.

The data elements tabulated in table 1 to table 10 categorised as *shall* are considered to be fundamental information necessary to identify and physically trace the products. These elements must be recorded.

The data elements tabulated in table 1 to table 10 categorised as *should* are specific information required by law in relation to food safety, quality and labelling together with important elements of commercially desirable information related to those matters. It is recommended that these elements are recorded.

The data elements tabulated in table 1 to table 10 categorised as *may* are further specific information required by law and commercially desirable information, considered to be of sufficient relevance to be included in the document. Businesses may choose to record these elements.

NOTE In these tabulations there is no repetition of the information originally recorded to describe the units created and their history, although businesses receiving those units later in the distribution chain will often need some of that information. The information is keyed to the unit IDs and can be supplied by commercial agreement between the businesses without having to re-input the data.

5.3 Breeders

For the purposes of this document, *breeders* are considered to be establishments that produce fish roe/eggs from brood stocks, often based on selection for special characteristics. They may carry out basic operations on the roe/eggs and brood stock such as temperature and light manipulation, and chemical treatments.

Prior to dispatch breeders may carry out their own operations including i.e. quality grading, and packing.

The trade units created by breeders can range from a few thousand to several millions of eggs passed into the hands of the next food business.

Table 1 —Detailed information requirements for breeders

Data element		Description	Examples	Categorisation		
				Shall	Should	May
BREEDERS						
FBR01	Food business ID	Name and address or GLN (n3+n13) of food business that operates breeding establishment.	Salmogen Ltd. 4321 Trondheim Norway	x		

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FBR02	Breeding establishment ID	Name, address and registration number or GLN (n3+n13) of breeding establishment	Salmogen Breeding Station 1 1234 Trondheim Norway NTFS0001 NO	x		
FBR03	Breeder GMP certification	Names of fish quality or food safety GMP schemes by which breeder is certified	Debio			x
FOR EACH TRADE UNIT CREATED						
Identity						
FBR04	Unit ID	GTIN+ (n2+n14+AI's)	(01) 07012345000001 (10) 0000000125	x		
Description						
FBR05	Species	Latin names or FAO 3alpha codes	Salmo salar or SAS	x		
FBR27	Area/country of origin	FAO area for captured marine fish, or country of origin for captured fish from inland waters and for farmed fish, or more specific location (may be several areas)	Norway		x	
FBR09	Day degrees	Sum of average temperature per day in Celsius degrees (°C)	490		x	
FBR17	Viability	Percentage of eggs, from original batch, that survives until dispatched	98 %			x
FBR10	Spawning date	Date of fertilisation	2002-09-25		x	
FBR11	Genetic characteristics	Description of batch. All females, mixed sex, triploids etc	Triploids			x
FBR12	Genetic ID	Stock name and year class	MOWI 2000			x
FBR13	GMO	Use of GMO in production or in feeding of broodstock Yes/No	No			x
FBR28	Number of eggs	Number of eggs in created trade unit	1.000.000	x		
Production history						
FBR08	Farm unit ID	Internal number of rearing unit (tank)	15		x	
FBR14	Temperature record	Temperature/time log of the product holding area for the period between reception and dispatc	Series of temperature (°C)/date and time points		x	
FBR15	Salinity record	‰	0 ‰			x
FBR16	Water flow record	Average use – litre/minute	10 l/min			x
FBR18	Disease record	Records of names and period of diseases or indication if records are available in electronic form, on paper or not available	Fungus infection 2003-03-02– 2004-04-02		x	
FBR19	Weight of parental fish	Weight of parental fish of our created trade unit. (kg)	16, 15, 18, 14, 16 (kg)			x

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FBR20	Age of parental fish	Age of parental fish of our created trade unit. (years and months)	3,12 – 3,05 – 3,05 – 3,05 (years)			x
FBR26	Treatment record	Medicine, vaccine or chemical names and period of use or indication if records are available in electronic form, on paper or not available.	Pyceze, 2002-10-01–2002-10-01			x
FOR EACH LOGISTIC UNIT CREATED						
Identities						
FBR21	Unit ID	SSCC (n2+n18)	SSCC: (00) 235467985462312345	x		
FBR22	Trade unit IDs	The IDs of the trade units within the logistic unit.	List of GTIN+	x		
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
FBR23	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	SSCC: (00) 235467985462312345	x		
Destination						
FBR24	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter or hatchery, etc.)	Fjord Harvest South Smolt 3456 Bergen Norway	x		
FBR25	Date and time of dispatch	Date and time of transfer to next food business	2002-09-25T12:15	x		

5.4 Hatcheries

For the purposes of this document, *hatcheries* are considered to be businesses that receive roe/eggs and keep it during the hatching stage and start feeding stage, and dispatch fish to the fish farms.

The hatcheries may change the nature of fishery products, by carrying out operations such as feeding, grading, treatments, etc.

Hatcheries create new trade units that can range from a few thousands to several hundred thousand fishes passed into the hands of the next food business.

Table 2 —Detailed information requirements for hatcheries

Data element		Description	Examples	Categorisation		
				Shall	Should	May
HATCHERY						
FHA01	Food business ID	Name and address or GLN (n3+n13) of food business that operates hatchery establishment	Fjord Harvest Ltd. 1234 Trondheim Norway	x		

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FHA02	Hatchery establishment ID	Name, address and registration number or GLN (n3+n13) of hatchery establishment	Fjord Harvest South Smolt, 3456 Bergen Norway NTFS0002 NO	x		
FHA03	Hatchery GMP certification	Names of fish quality or food safety GMP schemes by which hatchery is certified	Debio			x
FOR EACH UNIT RECEIVED						
Identities						
FHA04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	SSCC: (00) 235467985462312345	x		
FHA05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit.	List of GTIN+	x		
Source						
FHA06	Previous Food Business ID	Name and address or GLN (n3+n13) of previous food business that operates breeding company or transporter	Salmogen Breeding station 1 1234 Trondheim Norway	x		
FHA07	Date and time of reception		2002-09-25T06:20	x		
Control checks (either on logistic or separate trade units)						
FHA08	Temperature check	Temperature °C i.e. in received unit	4,0 °C		x	
FHA09	Temperature record	If recording device is affixed to batch, temperature/time record product holding area	Series of temperature (°C)/date and time points		x	
FHA10	Quality control checks	Type of checks + measured results, or indication if records are available in electronic form, on paper or not available	Paper			x
Transformation Information						
FHA11	Related created trade unit IDs	List of ID's of our created trade units that may incorporate part of this received trade unit.	GTIN+ GTIN+ GTIN+	x		
FHA12	Fractions	Fraction (%'s, kilos) of the received trade unit that go into each created unit	GTIN+, 33 %,150 kg GTIN+, 33%, 150 kg GTIN+, 33%, 150 kg		x	
FOR EACH NEW TRADE UNIT CREATED						
Identity						
FHA13	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	GTIN+: (01) 07012345000001 (10) 0000000125	x		

Data element		Description	Examples	Categorisation		
Description						
FHA15	Average weight	Average weight of created unit	75 g		x	
FHA34	Net weight	Net weight of created unit (kg)	20.000 kg	x		
FHA17	Day degrees	Sum of average temperature per day in Celsius degrees (°C)	2984			x
FHA18	Hatching date	Date of hatching	2005-11-01			x
FHA19	Smoltification status	Figures for Plasma Cl or ATPase. Mean and standard deviation, previous to dispatch (salmon)	144, ± 6			x
FHA20	Malformation	Records of malformation types and % of total in original batch, or indication if records are available in electronic form, on paper or not available.	Not available			x
Production history						
FHA14	Farm unit ID	Internal number of rearing unit (tank)	15		x	
FHA21	Disease record	Records of names and period of diseases, or indication if records are available in electronic form, on paper or not available	Paper		x	
FHA22	Starving period	Number of days with no feeding prior to transport	3 days		x	
FHA23	Temperature record	Temperature/time log of the product holding area for the period between reception and dispatch.	Series of temperature (°C) / date and time points		x	
FHA24	Oxygen record	Records of oxygen saturation in fish rearing tank, or indication if records are available in electronic form, on paper or not available	List of O ₂ data		x	
FHA25	Fish density record	Records of fish density in fish rearing tank, or indication if records are available in electronic form, on paper or not available	Electronic			x
FHA33	Treatment record	Medicine, vaccine or chemical names and period of use or indication if records are available in electronic form, on paper or not available.	Pyceze, 2002-10-01 – 2002-10-01			x
Transformation information						
FHA26	Related received trade unit IDs	List of ID's of our received trade units that make up this created trade unit	GTIN+ GTIN+	x		
FHA27	Fractions	Fraction (%'s + kilos) of the created unit that was made up by each received trade unit	GTIN+, 50%, 5000 kg GTIN+, 50%, 5000 kg		x	

Data element		Description	Examples	Categorisation		
FOR EACH LOGISTIC UNIT CREATED						
Identities						
FHA28	Unit ID	SSCC (n2+n18)	SSCC: (00) 235467985462312345	x		
FHA29	Trade unit IDs	The IDs of the trade units within the logistic unit	List of GTIN+	x		
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
FHA30	Unit ID	GTINs+ (n2+n14+AI's)	(01)07012345000001(10)) 0000000125	x		
Destination						
FHA31	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to where the unit is dispatched (transporter or fish farm, etc.)	Cargonor 7890 Florø Norway SF 123	x		
FHA32	Date and time of dispatch	Date and time of transfer to next food business	2002-09-25T10:30	x		

5.5 Fish Farms

For the purposes of this document, *fish farms* are considered to be businesses that receive fish and keep it during the on growing stage and dispatch fish to the slaughtering/processing link.

The fish farms may change the nature of fishery products, by carrying out operations such as feeding, grading, treatments etc.

Fish farms create new trade units that can range from a few thousands to several hundred thousand fishes passed into the hands of the next food business.

Table 3 — Detailed information requirements for fish farms

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FISH FARMS						
FFF01	Food business ID	Name and address or GLN (n3+n13) of food business that operates fish farm establishment	Fjord Harvest Ltd 67345 Bergen Norway	x		
FFF02	Fish farm establishment ID	Name, address and registration number or GLN (n3+n13) of fish farm establishment	Fjord Harvest Ocean site 2 67345 Bergen Norway NTFS0003 NO	x		
FFF03	Fish farm GMP certification	Names of fish quality or food safety GMP schemes by which fish farm is certified	Debio			x
FOR EACH UNIT RECEIVED						
Identities						
FFF04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	GTIN+: (01) 07012345000001 (10) 0000000125	x		
FFF05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit. List of GTIN+ (n2+n14+AI's)	List of GTIN+	x		
Source						
FFF06	Previous Food Business ID	Name, address or GLN (n3+n13) of previous food business from whom the unit was received. (Hatchery or transporter, etc).	Salmogen Breeding Station 1 1234 Trondheim Norway	x		
FFF07	Date and time of reception		2002-09-28T12:00	x		
Control checks (either on logistic or separate trade units)						
FFF08	Temperature check	Temperature °C i.e. in received unit	4,0 °C		x	
FFF09	Temperature record	If recording device is affixed to batch, temperature/time record from creation of unit onward.	Series of temperature (°C)/date and time points		x	
FFF10	Quality control checks	Type of checks + measured results or indication if records are available in electronic form, on paper or not available	Paper			x
Transformation Information						
FFF11	Related created trade unit IDs	List of ID's of our created trade units that may incorporate part of this received trade unit.	GTIN+ GTIN+	x		
FFF12	Fractions	Fraction (%'s, kilos) of the received trade unit that go into each created unit	GTIN+, 50%, 1000 kg GTIN+, 50%, 1000 kg		x	

Data element	Description	Examples	Categorisation		
FOR EACH NEW TRADE UNIT CREATED BY FISH FARM					
Identity					
FFF13	Unit ID	GTIN+ (n2+n14+AI's)	(01) 07012345000001 (10) 0000000125	x	
Description					
FFF15	Location of fish farm	Longitude + latitude or other appropriate specification.		x	
FFF39	Size (grade) distribution	Weight per size grade (1-2, 2-3, 3-4, etc) in kg	1-2 kg 200 kg 2-3 kg 500 kg 3-4 kg 250 kg	x	
FFF16	Condition factor	Mathematic formula: $100 \times (\text{weight (g)} / \text{length}^3 \text{ (cm)})$.	1,2		x
FFF17	Fat content	Measure of fat content in flesh.	14 %		x
FFF18	Colour	Estimate or count of pigmentation of flesh according to i.e. the Roche scale.	16		x
FFF19	Texture	Flesh texture (measured in Newton)			x
FFF20	Net weight	Net weight of created unit (kg)	7.000 kg	x	
FFF25	Average weight	Count of average weight of fish in created trade unit.	4,5 kg		x
FFF28	Total weight per quality grade		1000 kg Superior 30 kg Ordinary 5 kg Production		x
Production history					
FFF14	Farm unit ID	Internal number of rearing unit (cage).	15	x	
FFF29	Starving period	Number of days with no feeding before transport	10 days	x	
FFF23	Temperature record	Temperature/time log of the product holding area (cage) for the period between reception and dispatch	(°C)/date and time points	x	
FFF22	Fish density record	Fish density in created trade unit (kg/m3)	24 kg/m3		x
FFF30	Disease record	Records of names and period of diseases, or indication if records are available in electronic form, on paper or not available	Paper	x	
FFF38	Treatment record	Medicine, vaccine or chemical names and period of use or indication if records are available in electronic form, on paper or not available.	Slice, 2002-10-01 – 2002-10-01		x
Transformation information					
FFF31	Related received trade unit IDs	List of ID's of our received trade units that make up this created trade unit	GTIN+ GTIN+	x	

Data element		Description	Examples	Categorisation		
FFF32	Fractions	Fraction (%'s + kilos) of the created unit that was made up by each received trade unit	GTIN+, 50%, 5000 kg GTIN+, 50%, 5000 kg		x	
FOR EACH LOGISTIC UNIT CREATED						
Identities						
FFF33	Unit ID	SSCC (n2+n18)	(00) 235467985462312345	x		
FFF34	Trade unit IDs	The IDs of the trade units within the logistic unit	List of GTIN+	x		
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
FFF35	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	GTIN+: (01) 07012345000001 (10) 0000000125	x		
Destination						
FFF36	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter or processor, etc.)	Cargonor 7890 Florø Norway SF 123	x		
FFF37	Date and time of dispatch	Date and time of transfer to next food business	2002-09-25T10:30	x		

5.6 Live fish transporters

For the purposes of this document, *live fish transporters* are considered to be businesses that provide the service of transporting live fish. Transport may be by land, sea or air.

Transporters of live fish do not break down or create trade units but may break down or create logistic units.

Table 4 — Detailed information requirements for Live fish transporters

Data element		Description	Examples	Categorisation		
				Shall	Should	May
Live fish transporters						
FTR01	Food business ID	Name and address or GLN (n3+n13) of food business that operates transport vehicle or vessel establishment	Cargonor Ltd. 1234 Trondheim Norway	x		
FTR02	Transport vehicle or vessel establishment ID	Name (if vessel) and registration number of vehicle or vessel, or name, address and registration number of establishment, or GLN (n3+n13) number	Cargonor 3547 Florø Norway SF 232 NO	x		
FTR03	Transporter GMP certification	Names of fish quality or food safety GMP schemes by which transporter is certified	EFSIS			x
FOR EACH UNIT RECEIVED						
Identities						
FTR04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	GTIN+: (01) 7012345000001 (10) 0000000125	x		
FTR05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit. List of GTIN+ (n2+n14+AI's)	List of GTIN+	x		
Source						
FTR06	Previous Food Business ID	Name and address or GLN (n3+n13) of food business that operates hatchery or fish farm establishment.	Fjord Harvest Ocean site 2 67345 Bergen Norway	x		
FTR07	Date and time of reception		2002-09-28	x		
Control checks (either on logistic or separate trade units)						
FTR08	Temperature check	Temperature in unit when received °C	+2.0 °C		x	
FTR09	Temperature record	If recording device is affixed to batch, temperature/time record from creation of unit onward.	Series of temperature (°C)/date and time points		x	
FOR EACH NEW LOGISTIC UNIT CREATED BY TRANSPORTER						
Identities						
FTR10	Unit ID	SSCC (n2+n18)	SSCC: (00) 235467985462312345	x		
FTR11	Trade unit IDs	The IDs of the trade units within the logistic unit.	List of GTIN+	x		

Data element	Description	Examples	Categorisation			
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
FTR12	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	SSCC: (00) 235467985462312345	x		
Production history						
FTR13	Temperature control method	None, iced, iced and refrigerated or refrigerated	Iced and refrigerated		x	
FTR14	Temperature record	Temperature/time log of the product holding area for the period between reception and dispatch.	Series of temperature (°C)/date and time points		x	
FTR15	Disinfecting date	Date of last disinfecting and data of the boat/truck or indication if records are available in electronic form, on paper or not available.	2002-01-20		x	
FTR16	Water parameter record	Water parameter record (names and values) in fish carrier tank water during transport or indication if records are available in electronic form, on paper or not available.	List of parameter data		x	
FTR17	Loading/unloading technology	Type of technology for moving the fish from the fish farm into the live fish carrier and from the live fish carrier and into the harvesting unit.	Vacuums pump, gravity			x
FTR18	Fish density	Fish density in transport tank, kg fish per cubic meter water.	54 kg/m3			x
Destination						
FTR19	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter or fish farm, etc.)	Cargonor Ltd. 12234 Trondheim Norway	x		
FTR20	Place of delivery	If not at receivers address	Fjord Harvest Ocean site 2 67345 Bergen Norway NTFS0003 NO	x		
FTR21	Date and time of dispatch		2002-09-25T20:00	x		

5.7 Processors

For the purposes of this document, *processors* are considered to be businesses that change the nature of fishery products, by carrying out operations such as cutting or by treatments such as salting or cooking. This includes both primary and secondary processors.

Processors create new trade units. Those units may incorporate ingredients other than fishery products.

Table 5 — Detailed information requirements for processors

Data element		Description	Examples	Categorisation		
				Shall	Should	May
Processors						
CPR01	Food business ID	Name and address or GLN (n3+n13) of food business that operates processing establishment	Fjord Harvest Ltd. 6534 Bergen Norway	x		
CPR02	Processor establishment ID	Name, address and registration number or GLN (n3+n13) of processing plant	Fjord Harvest Processing plant 1, 9876 Brønnøysund Norway NO F 39	x		
CPR03	Processor GMP certification	Names of fish quality or food safety GMP schemes by which processor is certified	DNV			x
FOR EACH UNIT RECEIVED						
Identities						
CPR04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	GTIN+: (01) 07012345000001 (10) 0000000125	x		
CPR05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit.	List of GTIN+	x		
Source						
CPR06	Previous Food Business ID	Name (if applicable) and registration number of vehicle or name, address of establishment, or GLN (n3+n13)	NVF 24578	x		
CPR07	Date and time of reception		2002-09-25T06:20	x		
Control checks (either on logistic or separate trade units)						
CPR08	Temperature check	Temperature °C i.e. in received unit.	4,0 °C		x	
CPR09	Temperature record	If recording device is affixed to batch, temperature/time record from creation of unit onward.	Series of temperature (°C)/date and time points		x	
CPR10	Quality control checks	Type of checks + measured results (organoleptic, physical, chemical and microbiological, etc) or indication if records are available in electronic form, on paper or not available.	Total bacterial count, 106 /g			x
Production history (for the period between reception and processing)						
CPR11	Temperature control method	None, iced, iced and refrigerated or refrigerated.	Iced and refrigerated		x	
CPR12	Temperature record	Temperature/time log of the product holding area for the period between reception and processing.	Series of temperature (°C)/date and time points		x	

Data element		Description	Examples	Categorisation		
Transformation Information (for each trade unit)						
CPR13	Related created trade unit IDs	List of ID's of our created trade units that may incorporate part of this received trade unit.	GTIN+ GTIN+ GTIN+	x		
FPR11	Fractions	Fraction (%'s, kilos) of the received trade unit that go into each created unit	GTIN+ 33%, 7250 kg GTIN+ 33%, 7250 kg GTIN+ 33%, 7250 kg		x	
FOR EACH NEW TRADE UNIT CREATED BY PROCESSOR						
Identity						
CPR14	Unit ID	GTIN+ (n2+n14+AI'S)	(01) 07012345000001 (10) 0000000125	x		
Description						
CPR15	Type of unit	Box or case of 10 retail packs, etc	Box	x		
CPR16	Net weight	Net weight of created trade unit(kg)	10 kg	x		
CPR17	Name/type of product	E.g. turbot fillets, smoked salmon fillets	Salmon fillets	x		
CPR18	Product specification	Records of further details of product specification (quality and size grades, etc) are available in electronic form, on paper or not available	Paper			x
CPR19	Species	Latin names or FAO 3alpha codes (may be several species)	Salmo salar or SAS		x	
CPR20	Primary production method	Captured or farmed (may be both)	Farmed		x	
CPR21	Area/country of origin	FAO area for captured marine fish, or country of origin for captured fish from inland waters and for farmed fish, or more specific location (may be several areas)	Spain		x	
CPR22	Composition	List of names and %'s by weight, including fish	Salmo salar 100%	x		
CPR23	Product condition	Ambient, chilled or frozen	Chilled	x		
CPR24	Date of durability	Best before or sell by date, as appropriate	Best before 2002-10-25		x	
Further description for farmed primary products						
FPR01	Product form	Round fish, head off, etc	Head off		x	
FPR02	Quality grade	Superior, ordinary, production, etc	Superior			x
FPR03	Size grade	1-2, 2-3, 3-4, 4-5, etc (kg)	2-3 (kg)			x
FPR09	Killing method	Stunning, CO ²	CO ²			x

Data element		Description	Examples	Categorisation		
FPR10	GMO	Any use of GMO or products from GMO in product or raw material Yes or No	No			x
FPR13	Freshness grade	EU or QIM freshness grade, or ungraded	EU grade A		x	
Production history						
CPR25	Process specification	Records of process specification are available in electronic form, on paper or not available	Paper			x
CPR26	IDs of production lines	The business's own IDs of the particular production lines used	A3, B4			x
CPR27	Date and time of production	Time of packing/labeling at the end of line	2002-10-01T12:30		x	
CPR28	HACCP	Records of HACCP analysis and critical control point checks are available in electronic form, on paper or not available	Paper			x
CPR29	Hygiene checks	Type of checks + measured results (swab tests, etc) or indication if records are available in electronic form, on paper or not available	Paper			x
CPR30	Temperature record	Temperature/time record or indication if records are available in electronic form, on paper or not available	Electronic			x
CPR31	Product quality control checks	Type of checks + measured results (organoleptic, physical, chemical and microbiological, etc) or indication if records are available in electronic form, on paper or not available	Listeria 0			x
Transformation information						
CPR32	Related received trade unit IDs	List of ID's of our received trade units that make up this created trade unit	GTIN+ GTIN+ GTIN+ GTIN+	x		
FPR12	Fractions	Fraction (%'s + kilos) of the created unit that was made up by each received trade unit	GTIN+, 25%, 50 kg GTIN+, 25%, 50 kg GTIN+, 25%, 50 kg GTIN+, 25%, 50 kg		x	
FOR EACH LOGISTIC UNIT CREATED						
Identities						
CPR33	Unit ID	SSCC (n2+n18)	(00) 235467985462312345	x		
CPR34	Trade unit IDs	The IDs of the trade units within the logistic unit	List of GTIN+	x		
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
CPR35	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	GTIN+: (01) 07012345000001 (10) 0000000125	x		

Data element	Description	Examples	Categorisation			
Production history (related to the logistic or separate trade units, as appropriate)						
CPR36	Temperature control method	None, iced, iced and refrigerated or refrigerated	Iced and refrigerated		x	
CPR37	Temperature record	Temperature/time log of the product holding area for the period between reception and dispatch.	Series of temperature (°C)/date and time points		x	
Destination						
CPR38	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter or storers, etc.)	Cargonor 7890 Florø Norway	x		
CPR39	Date and time of dispatch	Date and time of transfer to next food business	2002-09-25T10:30	x		

5.8 Transporters and Storers

For the purposes of this document, *transporters and storers* are considered to be businesses that provide the service of transporting or storing goods. They may operate at various stages in distribution chains, transporting or storing raw materials or products. Transport may be by land, sea or air.

Transporters and storers do not break down or create trade units but may break down or create logistic units.

Table 6 — Detailed information requirements for transporters and storers

Data element		Description	Examples	Categorisation		
				Shall	Should	May
TRANSPORTER OR STORER						
CTS01	Food business ID	Name and address or GLN (n3+n13) of food business that operates transport vehicle or storage establishment	Cargonor Ltd. 12234 Trondheim Norway	x		
CTS02	Transport vehicle or storage establishment ID	Name, address and registration number or GLN (n3+n13) of establishment	Cargonor 1234 Florø Norway SF 23123	x		
CTS03	Transporter or storer GMP certification	Names of fish quality or food safety GMP schemes by which transporter or storer is certified	EFSIS			x
FOR EACH UNIT RECEIVED						
Identities						
CTS04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	SSCC: (00) 235467985462312345	x		
CTS05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit.	List of GTIN+	x		
Source						
CTS06	Previous Food Business ID	ID of the previous food business from whom the unit was received. Name, address or GLN (n3+n13) of previous food business.	Fjord Harvest Processing plant 1, 9876 Brønnøysund Norway	x		
CTS07	Date and time of reception		2002-06-20T14:12	x		
CTS08	Place of collection	Name and address (required only for transporters)	Grimsby Seafood, Fish Dock Road, Grimsby, GY1 9SE, England	x		
Control checks (related to the logistic or separate trade unit, as appropriate)						
CTS09	Temperature check	Temperature of unit when received °C	+2.0 °C		x	
FOR EACH NEW LOGISTIC UNIT CREATED BY TRANSPORTER OR STORER						
Identities						
CTS10	Unit ID	SSCC (n2+n18)	SSCC: (00) 235467985462312345	x		
CTS11	Trade unit IDs	The IDs of the trade units within the logistic unit.	List of GTIN+	x		

Data element	Description	Examples	Categorisation			
			Shall	Should	May	
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
CTS12	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	SSCC: (00) 235467985462312345	x		
Production history (related to the logistic or separate trade units, as appropriate)						
CTS13	Temperature control method	None, iced, iced and refrigerated or refrigerated	Iced and refrigerated		x	
CTS14	Temperature record	Temperature/time log of the product holding area for the period between reception and dispatch	Series of temperature (°C)/date and time points		x	
Destination						
CTS15	Next Food Business ID	ID of next food business to whom unit is dispatched (transporter or retailer, etc.) Name and address or GLN (n3+n13) of food business	Cargonor Ltd. 12234 Trondheim Norway	x		
CTS16	Date and time of dispatch		2002-09-25T20:00	x		
CTS17	Place of delivery	If not at receivers address	Cargonor Ltd terminal 4 0213 Oslo Norway	x		

5.9 Traders and wholesalers

For the purposes of this document, *traders and wholesalers* are considered to be merchants who buy, sell and physically trade fishery products to other businesses. They may operate at various stages in distribution chains, trading raw materials or products. They include cash-and-carry type businesses supplying retailers and caterers.

Some traders and wholesalers may create new trade units, by breaking down trade units they have received into smaller units or by picking and mixing individual fishery products from a number of trade units they have received, in order to meet the needs of particular customers. However, traders and wholesalers do not change the nature of the fishery products they trade, or they would be considered also to be *processors*.

Traders and wholesalers may also break down or create logistic units.

Table 7 — Detailed information for traders and wholesalers

Data element		Description	Examples	Categorisation		
				Shall	Should	May
TRADER OR WHOLESALER						
CTW01	Food business ID	Name and address or GLN (n3+n13) of food business that operates trading or wholesaling establishment	The Fish Supply Co, 13 Fish Street, Manchester, MA14 2LP, England	x		
CTW02	Trader or wholesaler establishment ID	Name, address and registration number or GLN (n3+n13) of trading or wholesaling establishment	Sheffield Fish Supplies, 48 Smith Street, Sheffield, SH31 3TU, England. SH678 UK	x		
CTW03	GMP certification	Names of fish quality or food safety GMP schemes by which trader or wholesaler is certified	SGS			x
FOR EACH UNIT RECEIVED						
Identities						
CTW04	Unit ID	SSCC (n2+n18) if received as a logistic unit or GTIN+ (n2+n14+AI's) if received as a separate trade unit	SSCC: (00) 235467985462312345	x		
CTW05	Trade unit IDs	List of GTIN+ (n2+n14+AI's) of the trade units that make up the logistic unit (required only if received as a logistic unit that is to be broken down by the trader or wholesaler)	List of GTIN+	x		
Source						
CTW06	Previous food business ID	Name and address or GLN (n3+n13) of food business from whom the unit was received(auction, processor or transporter, etc.)	The Trucking Co, Goods Yard, Leeds, LS8 9FH, England	x		
CTW07	Date and time of reception	Date and time of transfer from previous food business	2002-06-29T20:00	x		
Control checks (related to the logistic or separate trade units, as appropriate)						
CTW08	Temperature check	Temperature of unit °C	+2.0 °C		x	
CTW09	Temperature record	Temperature/time log (if there is a recording device affixed to the unit)	Series of temperature (°C)/date and time points		x	
FOR EACH NEW TRADE UNIT PRODUCED BY TRADER OR WHOLESALER						
Identity						
CTW10	Trade unit ID	GTIN+ (n2+n14+AI'S)		x		

Data element		Description	Examples	Categorisation		
				Shall	Should	May
Description						
CTW11	Type of unit	Description of physical type of unit (box or case of 10 retail packs, etc)	Box	x		
CTW12	Product condition	Ambient, chilled or frozen	Chilled	x		
For each different component part of trade unit						
CTW13	Type of fishery product	Identifying description or name of fishery product	Sheffield Fish cod fillets	x		
CTW14	Net weight	Weight of fishery product (kg)	10 kg	x		
CTW15	Received trade unit ID	The GTIN+ (n2+n14+AI's) of the received trade unit from which the component was taken	List of GTIN+	x		
FOR EACH NEW LOGISTIC UNIT PRODUCED BY TRADER OR WHOLESALER						
Identities						
CTW16	Unit ID	SSCC (n2+n18)	(00) 235467985462312345	x		
CTW17	Trade unit IDs	List of GTIN+ (n2+n14+AI's) of the trade units that make up the logistic unit	List of GTIN+	x		
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
CTW18	Unit ID	SSCC (n2+n18) if dispatched as a logistic unit or GTIN+ (n2+n14+AI's) if dispatched as a trade unit	GTIN+: (01) 07012345000001 (10) 0000000125	x		
Production history (related to the logistic or separate trade units, as appropriate)						
CTW19	Trader or wholesaler temperature control method	None, iced, iced and refrigerated or refrigerated	Iced and refrigerated		x	
CTW20	Trader or wholesaler temperature record	Temperature/time log of product holding area for period between reception and dispatch	Series of temperature (°C)/date and time points		x	
Destination						
CTW20	Next food business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter, processor or retailer, etc.)	F. Monger and Sons Ltd, High Street, Sheffield, SH1 5GF, England	x		
CTS21	Date and time of dispatch	Date and time of transfer to next food business	2002-07-30T07:00	x		

5.10 Retailers and caterers

For the purposes of this document, *retailers and caterers* are considered to be suppliers to the public, not to other businesses. They are likely to break down trade units received and may change the nature of fishery products by preparing them for their customers. Some may package and label the items sold. Retailers and caterers are encouraged to record information on their sales but the scope of this document does not extend to sale to the public.

Table 8 — Detailed information for retailers and caterers

Data element		Description	Examples	Categorisation		
				Shall	Should	May
RETAILER OR CATERER						
CRC01	Food business ID	Name and address or GLN (n3+n13) of food business that operates retail or catering establishment	F. Monger and Sons Ltd, High Street, Sheffield, SH1 5GF, England	x		
CRC02	Retail or catering establishment ID	Name, address and registration number or GLN (n3+n13) of retail/catering establishment	F. Monger and Sons Ltd, High Street, Sheffield, SH1 5GF, England. SH629 UK	x		
CRC03	Processor GMP certification	Names of fish quality or food safety GMP schemes by which retailer or caterer is certified	SGS			x
FOR EACH UNIT RECEIVED						
Identities						
CRC04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	SSCC: (00) 235467985462312345	x		
CRC05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit.	List of GTIN+	x		
Source						
CRC06	Previous Food Business ID	Name, address or GLN (n3+n13) of previous food business from whom the unit was received (processor, wholesaler or transporter, etc)	Cargonor Florø Norway	x		
CRC07	Date and time of reception		2002-06-20T10:34	x		
Control checks (either on logistic or separate trade units)						
CRC08	Temperature check	Temperature of unit °C at reception	4,0 °C		x	
CRC09	Temperature record	If recording device is affixed to batch, temperature/time record from creation of unit onward.	Series of temperature (°C) / date and time points			x

Data element	Description	Examples	Categorisation			
			Shall	Should	May	
FOR EACH TRADE UNIT HELD FOR SALE						
Production history (related to the logistic or separate trade units, as appropriate)						
CRC10	Temperature control method	None, iced, refrigerated, iced and refrigerated, etc	Iced and refrigerated		x	
CRC11	Temperature record	Temperature/time log of product storage area for period between reception and sale.	Series of temperature (°C)/date and time points		x	

5.11 Fish Feed production

For the purposes of this document, *fish feed producer* are considered to be businesses that produce fish feed based on an indefinite range of ingredients. They may be considered, as an equivalent to the *processors* but will be presented as a separate link in this document. Fish feed producers create new trade units that can range from one feed bag to bulk units of several hundreds of tons passed into the hands of the next food business.

Table 9 — Detailed information for fish feed production

Data element	Description	Examples	Categorisation			
			Shall	Should	May	
FISH FEED						
FFE01	Food business ID	Name and address or GLN (n3+n13) of food business that operates feed company	Uni Fishfeed 1234 Narvik Norway	x		
FFE02	Feed producer establishment ID	Name, address and registration number or GLN (n3+n13) of feed plant establishment	Uni Fishfeed dep. 02 1234 Narvik Norway αNO02F1234B	x		
FFE03	Feed producer GMP certification	Names of certification schemes	SGS			x
FOR EACH UNIT RECEIVED						
Identities						
FFE04	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit)	(00) 235467985462312345	x		
FFE05	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit.	List of GTIN+	x		
Source						
FFE06	Previous Food Business ID	Name, address and registration number or GLN (n3+n13) of food business that operates fish meal/oil etc. producer establishment	Fishmeal A/S Florø NO SF 123 Norway	x		

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FFE07	Date and time of reception		2002-06-20T14:15	x		
Control checks (either on logistic or separate trade units)						
FFE08	Quality control checks	Type of checks + measured results (organoleptic, physical, chemical and microbiological, etc) or indication if records are available in electronic form, on paper or not available	Yes, electronic form			x
Production history						
FFE10	Temperature record	Temperature/time log of the product holding area for the period between reception and processing	Series of temperature (°C)/date and time points		x	
Transformation Information						
FFE11	Related created trade unit IDs	List of ID's of our created trade units that may incorporate part of this received trade unit.	GTIN+ GTIN+ GTIN+	x		
FFE12	Fractions	Fraction (%'s, kilos) of the received trade unit that go into each created unit	GTIN+, 33%, 7250kg GTIN+, 33%, 7250kg GTIN+, 33%, 7250kg		x	
FOR EACH NEW TRADE UNIT CREATED						
Identity						
FFE13	Unit ID	GTIN+ (n2+n14+AI's)	(01) 07012345000001 (10) 0000000125	x		
Description						
FFE14	Net weight	Net weight of created trade unit (kg)	10 kg	x		
FFE15	Type of unit	Bags, bulk etc.	Bulk			x
FFE16	Name/type of product	Smolt feed, (commercial name)	Dynamic blue			x
FFE17	Production date	Time of packing/labelling at end of line	2002-06-15	x		
FFE18	Product form	Meal, pellets, pellets size etc.	Pellets, 2,5 – 7,0 mm	x		
FFE19	Composition	List of ingredient names and %'s by weight	Fat 37 % Protein 55 %	x		
FFE20	GMO	Any use of GMO or products from GMO in product or raw material, Yes or No	No	x		
FFE21	Date of durability	Best before or sell by date, as appropriate	Best before 2002-06-30		x	
FFE36	Product specification	Records of further details of product specification are available in electronic form, on paper or not available	Paper			x
FFE37	Species	Latin names or FAO 3alpha codes (may be several species)	Mallotus villosus		x	

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FFE38	Primary production method	Captured or farmed (may be both)	Captured		x	
FFE39	Area/country of origin	FAO area for captured marine fish, or country of origin for captured fish from inland waters and for farmed fish, or more specific location (may be several areas)	Spain		x	
Production history						
FFE22	Process specification	Records of process specification are available in electronic form, on paper or not available	Paper			x
FFE23	Production lines IDs	The business's own IDs of the particular production lines used	A3, B4			x
FFE24	HACCP	Records of HACCP analysis and critical control point checks are available in electronic form, on paper or not available	Paper			x
FFE25	Hygiene checks	Type of checks + measured results (swab tests, etc) or indication if records are available in electronic form, on paper or not available	Paper			x
FFE26	Temperature records	Temperature/time record or indication if records are available in electronic form, on paper or not available	Electronic			x
FFE27	Product quality control checks	Type of checks + measured results (organoleptic, physical, chemical and microbiological, etc) or indication if records are available in electronic form, on paper or not available	Total bacterial count, 106 /g			x
Transformation information						
FFE28	Related received trade unit IDs	List of ID's of our received trade units that make up this created trade unit	GTIN+ GTIN+ GTIN+ GTIN+	x		
FFE29	Fractions	Fraction (%'s + kilos) of the created unit that was made up by each received trade unit	GTIN+, 25%, 50 kg GTIN+, 25%, 50 kg GTIN+, 25%, 50 kg GTIN+, 25%, 50 kg		x	
FOR EACH LOGISTIC UNIT CREATED						
Identities						
FFE30	Unit ID	SSCC (n2+n18)	(00) 235467985462312345	x		
FFE31	Trade unit IDs	The IDs of the trade units within the logistic unit.	List of GTIN+	x		

Data element	Description	Examples	Categorisation			
			Shall	Should	May	
FOR EACH UNIT DISPATCHED (either as a logistic unit or a separate trade unit)						
Identity						
FFE32	Unit ID	SSCC (n2+n18) (if dispatched as a logistic unit) or GTIN+ (n2+n14+AI's) (if dispatched as a separate trade unit)	SSCC: (00) 235467985462312345	x		
Production history						
FFE33	Temperature record	Temperature/time log of the product holding area for the period between processing and dispatch	Series of temperature (°C)/date and time points		x	
Destination						
FFE34	Next Food Business ID	Name and address or GLN (n3+n13) of the food business to whom the unit is dispatched (transporter hatchery or fish farm, etc.)	Hill Fish farm 1234 Hitra Norway	x		
FFE35	Date and time of dispatch	Date and time of transfer to next food business	2002-06-20T14:15	x		

5.12 Bringing in Supplies from Outwith the Tracefish Standard

The following information requirements apply to fish and materials received from businesses that are not operating to the Tracefish specifications. This includes the supply of non-fish ingredients to breeders, hatcheries, fish farms, processors and fish feed producers. These requirements replace those under the heading *for each unit received*, sub-heading *identities*, in each of the respective tables above, and are additional to the other requirements tabulated. They both identify and provide a description of the received units.

Table 10 — Bringing in Supplies from Outwith the Tracefish Standard

Data element	Description	Examples	Categorisation			
			Shall	Should	May	
FOR EACH UNIT RECEIVED FROM OUTWITH THE TRACEFISH STANDARD						
Identities						
CTO01	Unit ID	SSCC (n2+n18) (if received as a logistic unit) or GTIN+ (n2+n14+AI's) (if received as a separate trade unit).	SSCC: (00) 23546798546231234 5	x		
CTO02	Trade unit IDs	If received as a logistic unit, the IDs of the trade units within the logistic unit:	List of GTIN	x		
FOR EACH TRADE UNIT RECEIVED FROM OUT WITH THE TRACEFISH STANDARD						
General description						
CTO03	Creator of unit	Name, address and registration number or EAN code of establishment.	The Mei Ling Fishery Co, Wharf 9, East harbour, Hong Kong. HK 26980	x		
CTO04	Creator's GMP certification	Names of certification schemes.	EFSIS			x
CTO05	Type of unit	Individual large fish, box of fish, package or case of ingredients or products, etc.	Box	x		
CTO06	Net weight	Net weight of received trade unit (kg)	45 kg	x		
CTO07	Product condition	Live, ambient, chilled or frozen	Chilled	x		
Further description of each trade unit for all fishery products						
CTO08	Species	Latin names or FAO 3alpha codes (may be several species)	Gadus morhua		x	
CTO09	Primary production method	Captured or farmed (may be both)	Farmed		x	
CTO10	Area/country of origin	FAO area for captured marine fish, or country of origin for captured fish from inland waters and for farmed fish, or more specific location (may be several areas)	Chile		x	
Further description of each trade unit for captured fish prior to processing						
CTO11	Product form	Whole, gutted or headed, etc or CN code.	Gutted	x		
CTO12	Size grade	Nominal weight (kg) or length (cm) range, or ungraded	Ungraded		x	
CTO13	Date of capture or sailing	Preferably recorded as date when fish brought on board but otherwise recorded as date when vessel left port	Captured 2002-01-23	x		
CTO14	Fishing method	Trawl, long line or gill net, etc or FAO alpha code	Long line S		x	

Data element		Description	Examples	Categorisation		
				Shall	Should	May
CTO15	Ethical aspects of fishery	Names of sustainable fishing schemes by which fishery is certified, and approved environmental benefits of fishing technique (dolphin friendly, etc).	MSC			x
Further description for each trade unit of farmed fish prior to processing						
FTO01	Farm unit ID	Internal number of rearing unit (tank, cage)	15		x	
FTO02	GMO	Any use of GMO in product or raw material	No			x
FTO03	Hatching date	Date of hatching for the batch	2005-11-01			x
FTO04	Day degrees	Sum of average temperature per day in Celsius degrees (°C)	490		x	
FTO05	Location of fish farm	Longitude + latitude or other appropriate specification.			x	
FOT06	Treatment record	Medicine, vaccine or chemical names and period of use or indication if records are available in electronic form, on paper or not available.	Pyceze, 2002-10-01 – 002-10-01			x
FTO08	Disease record	Records of names and period of diseases or indication if records are available in electronic form, on paper or not available	Fungus infection 2003-03-02–2004-04-02		x	
Further description of each trade unit for processed fishery products						
CTO16	Name/type of product	Commercial product name	Vacuum packed smoked salmon	x		
CTO17	Composition	List of scientific names, including fish species, and %'s by weight	Salmo salar 100 %	x		
CTO18	Date of durability	Best before or sell by date, as appropriate	2002-06-30		x	
CTO19	Date and time of production	Date of packing/labelling at end of line	2002-06-23T12:50		x	
FTO07	GMO	Any use of GMO in product or raw material	No			x
Further description of each trade unit for ingredients to be incorporated in processed fishery products						
CTO20	Name/type of ingredient	Descriptive name of ingredient (salt, olive oil, breadcrumbs or potato flakes, etc).	Salt	x		
CTO21	Composition	List of scientific names and %'s by weight	NaCl 100%	x		
CTO22	Date of durability	Best before or sell by date, as appropriate	Best before 2002-09-25		x	
Further description of each trade unit for fish feed						
FTO10	Name/type of product	Commercial product name	Smolt Feed 4	x		

Data element		Description	Examples	Categorisation		
				Shall	Should	May
FTO11	Date of durability	Best before or sell by date, as appropriate	Best before 2002-09-25		x	
FTO12	Production date	Time of packing/labelling at end of line	2002-07-02T11:50	x		
FTO13	Composition	List of names and %'s by weight	Fat 37 % Protein 55 %	x		
FTO14	GMO	Any use of GMO in raw material	No			x
FTO15	Species	Latin name of species used in meal and oil production (may be several species)	Mallotus villosus			x
FTO16	Area/country of origin	FAO catch area of fish used in meal and oil production.	5A			x
FTO17	Supplier of raw material	Name and address or GLN (n3+n13) of producer.		x		
Further description for medicine, vaccine, chemical treatment						
FTO18	Name/type of product	Commercial product name	Mulivac 5000	x		
FTO19	Date of durability	Best before or sell by date, as appropriate	Best before 2002-09-25		x	
FTO20	Production date	Time of packing/labelling at end of line	02-07-2002	x		
FTO21	Composition	List of scientific names and %'s by weight		x		

Annex A (informative)

The philosophy of the Tracefish scheme

A.1 The concept of traceability

ISO defines traceability as *the ability to trace the history, application or location of that which is under consideration*, and notes that *when considering products this can relate to the origin of materials and parts and the processing history*.

This is a more extensive definition than that in the EU Regulation on Food Law, with implications beyond that law's fundamental requirement to be able to trace the food through the various food businesses that handle it in the distribution chain. The information required may therefore include what the food is and what has happened to it, as well as where it has come from and who was responsible for it. These further aspects of traceability are important in relation to food safety, quality and labelling.

Traceability concerns only the *ability* to trace things, which means that the necessary information must be available when required. It does not mean that the information must at all times be *visible* by being labelled on the food or being with it.

A.2 Dealing with the diversity and complexity of the farmed fish distribution chains

To achieve a commercially significant level of participation, the Tracefish scheme must be inclusive rather than directed at a particular distribution chain, yet be as simple and understandable as possible.

The philosophy adopted is that although virtually every distribution chain is different, they all appear to be made up of an arrangement of a number of characteristic components or *building blocks* and the generic information requirements associated with each of those building blocks can be standardised.

The characteristic components identified are:

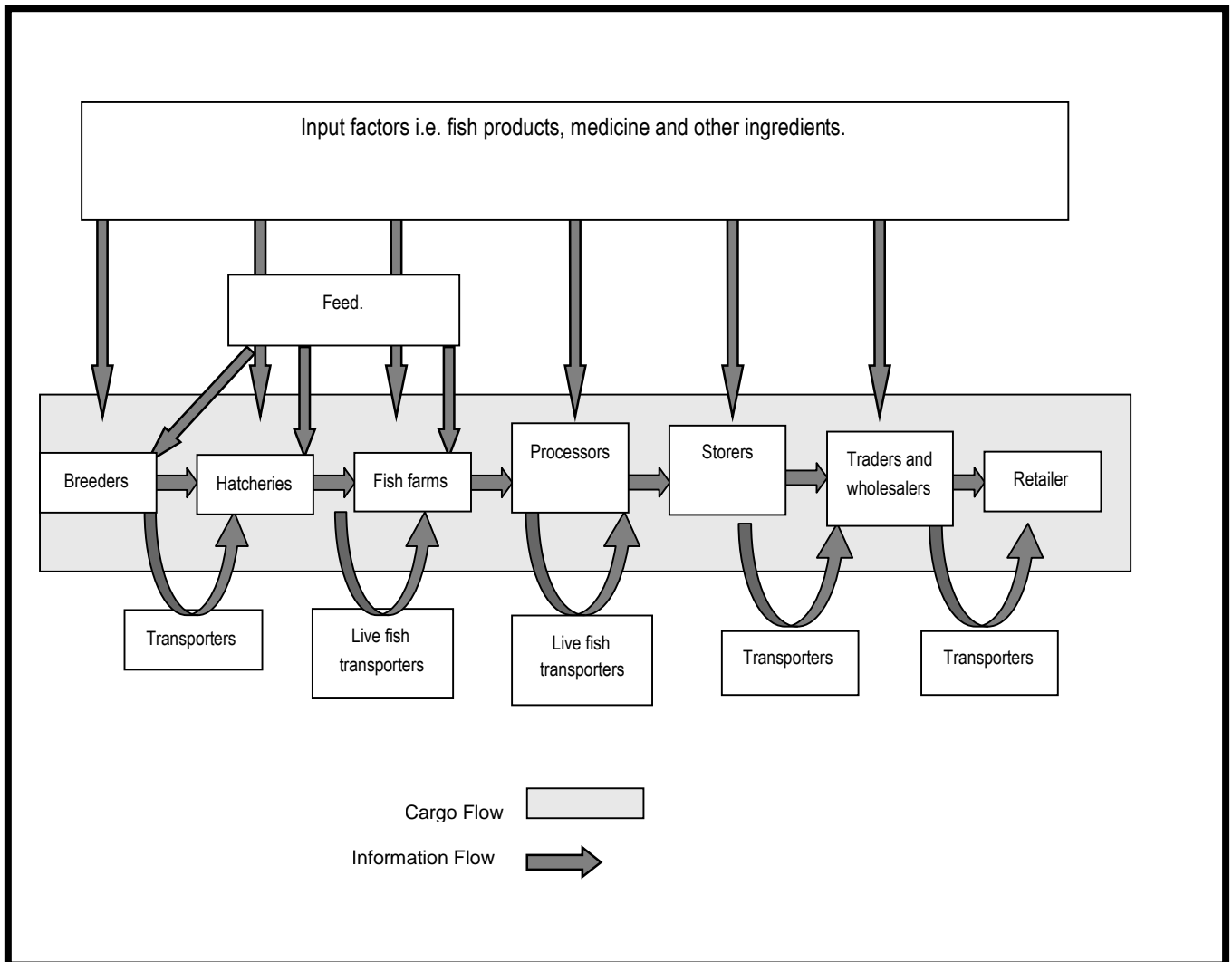
- breeders;
- hatcheries;
- fish farms;
- live fish transporters;
- processors;
- transporters and stores;
- retailers;
- fish feed producers.

Any given distribution chain may be made up of some or all of these components but not necessarily in the sequence listed. Transport and storage can occur at various stages in the chain, although the information requirements for transporters and storers should in principle remain similar. Processing may be split into primary and secondary (added value) processing and it may even be done at the fish farm, but again the

information requirements for processors should in principle remain similar. Trading and wholesaling may be dealing in the raw materials, semi-processed or fully processed products, but again the requirements for traders and wholesalers should remain similar.

The Structure of the Fish Farming Distribution Chain.

The most common links are shown.



Some businesses may carry out the functions of more than one of these building blocks, for example distribution businesses may act as wholesalers and as transporters, in which case those businesses must take up the relevant information requirements for each of the functions carried out.

It is recognised that there is difficulty in fitting this standardised building block approach to some specialised distribution chains. The chains handling live bivalve molluscs are an obvious case as they involve specialised operations such as live holding, relaying and purification and substantially different food safety and animal health requirements. The chains for fishmeal and oil production, which include industrial fishing and the collection of processing waste, are similarly specialised.

To ease the task of developing the Tracefish scheme, this initial captured and farmed fish information specification is geared to the production and distribution for human consumption of wild-caught and farmed finfish and their products. Some shellfish, such as shrimp and nephrops, may fit naturally into this mould.

Information specifications for other, more specialised distribution chains will have to be considered after this initial project. Essential information on the supply of other food materials into the finfish distribution chains, such as the ingredients incorporated into added value products, is included in the specification but the production chains for those materials are not covered.

Adopting this building block approach enables the information documents for captured and farmed distribution chains to be substantially harmonised. In principle they need differ only in the information requirements for primary production.

A.3 The types of information required and their prioritisation

The types of information that may be required can be broadly categorised into:

- fundamental traceability information;
- specifically required information;
- and commercially desirable information.

Fundamental traceability information is that required to identify the food and trace its physical movement through the distribution chains. Essential parts of this information concerning the suppliers and destinations of food will, under the EU Regulation on Food Law, have to be held by each food business and be made available to the competent authorities and to other food business operators for the purpose of product withdrawal or recall. For each food business, the fundamental information includes:

- their own ID and location;
- the quantities, nature and unit IDs of the food (including materials to be incorporated in food) received by the business;
- the ID's of the previous food businesses (from whom those units were received);
- the dates/times and places of reception;
- the quantities, nature and unit IDs of the food dispatched by the business;
- the ID's of the next food businesses (to whom those units are dispatched);
- the dates/times and places of dispatch;
- and the 'mapping' relationships between the units received and dispatched (when units are transformed by the business).

Note that when units are transformed by a business, the mapping relationship between the units received and the units dispatched need not be simple and direct. For example, a fish processor may use many units of raw material, perhaps from different sources, whilst producing units of product. Each unit of product may possibly be associated with a number of units of raw material, and vice versa. Traceability requires that the mapping relationship is known, not that it should be a simple 1:1 relationship.

Specifically required information is particular information on the nature of the food and on the circumstances of its production that is required by law for particular purposes, and which must be made available to the appropriate authorities or persons for those purposes. These requirements vary with national legislation and the type of food and food business.

Examples of specifically required information include:

- the species, method of production and area of origin that for many products is required by EU law to be labelled at retail sale, and hence which must be passed through the distribution chains from capture onward;
- the results of chemical and bacterial analyses and temperature control logs, etc, that are specifically required under food safety legislation or under the general obligation for the monitoring of critical control points, which must be held by the food businesses and be accessible by the food authority (and be directly supplied to the food authority in some instances);
- animal health, particularly disease control, and welfare information concerning the origins, movement and condition of some species and products, which must be supplied or be available to the authorities and/or be passed through the distribution chains to other food businesses;
- and customs and excise and trading (financial) information that must be held by businesses and be supplied to the appropriate authorities for purposes such as taxation, etc.

Commercially desirable information, on the nature of the food and on the circumstances of its production, is sought by food businesses for a variety of reasons. These include maximising the efficiency of their own operations, limiting their own liabilities under product liability and safety legislation, assuring the safety and quality of their products, enabling accurate labelling and substantiating their marketing claims, etc. The requirements for this information do, of course, vary from business to business.

Examples of commercially desirable information include much of that already listed above and:

- details of raw materials, products, processes and controls that are required for reasons of business efficiency, product labelling and to ensure product safety and quality;
- ethical information on the nature of the fish farming, on their sustainability and on their environmental impact that is required to satisfy the concerns of consumers;
- the date of harvest of the fish and data on temperature control through the chain that are required to assure product safety and quality;
- and information on the GMP status of the food businesses involved in the chain that is required to ensure product safety and quality, etc.

Clearly there is a huge range of information of potential interest. Given this and the enormous variety of fishery products and distribution chains, and differences between countries in their specific legal requirements, the information specifications cannot itemise all the information that may possibly be required in every situation. Hence there is a need for prioritisation, with the aim of providing a generic basis for traceability. For this purpose, the information itemised in the documents is categorised as:

- the fundamental information necessary to identify and physically trace the products, that shall be recorded;
- specific information that is required by law in relation to food safety, quality and labelling, together with important elements of commercially desirable information related to those matters, that should be recorded;
- and further specific and commercial information considered to be of sufficient relevance to be included in the documents, that may be recorded.

Some areas of relevant information, such as the HACCP analyses and checks carried out by a processor, are complex data sets that are individual to each product, process and business and so are difficult to standardise. To account for this, some flexibility is allowed in the specifications for businesses to record further information in their own non-standardised files but keyed to the units of food produced.

A.4 The units to be identified and traced

The physical units traded are those to be identified and traced. These may range from individual large fish, boxes of fish or even the entire catch landed by the vessel, through to packages of products dispatched by the processor.

An ID system that applies to the trade in goods of all types is already in operation throughout the world, under the auspices of EAN International and the Uniform Code Council. This system is widely used in the food industry, including current trade in processed fishery products.

The EAN.UCC system defines a *trade unit* as *any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced or ordered or invoiced at any point in the supply chain, and adds this definition covers raw materials through to the end-user products and also includes services, all of them having pre-defined characteristics.*

Trade units are marked with a *Global Trade Identification Number* (GTIN) which incorporates a code allocated by EAN.UCC to uniquely identify the company and another code allocated by the company to denote the item (usually indicating product type). Further data can be attributed to the item using *Application Identifiers* (AI's), commonly used to further describe the product (e.g. weight and date of minimum durability) and to uniquely identify each particular trade unit. The production batch and item serial numbers, or simply the date and time of production, are often used to uniquely identify each trade unit. A further EAN code, the *Global Location Number* (GLN), can be allocated by the company to identify particular locations (e.g. fish farms).

However, goods are also transported or stored as *logistic units*, such as pallets, which contain a number of separately identified trade units. The trade units within a logistic unit may all be similar in type or they may be different, for example in a pallet of mixed products assembled by wholesaler to send to a retailer. Each logistic unit is marked with a *Serial Shipping Container Code* (SSCC) which uniquely identifies the company and the particular logistic unit.

These various EAN.UCC identifiers are usually expressed as standardised bar code labels on the units.

To achieve chain traceability, the business that creates each trade unit, whatever its form, must uniquely identify it with a GTIN plus a particular unit code (i.e. a GTIN+ in the terminology of this document). Businesses that transform trade units, such as processors who convert the units of raw materials received into the products dispatched, create new units and must give them new IDs. The relevant information for the traceability of the units is recorded by their creator and by the businesses that subsequently trade them physically through the distribution chain.

Similarly, businesses that assemble logistic units must identify each logistic unit with a SSCC and record the IDs of the trade units that make up each logistic unit. Businesses that transport, store or trade intact logistic units merely have to record the limited information related to those logistic units rather than their component trade units. However, distributors often transform logistic units or break them down to the separate trade units prior to dispatch. These businesses must also record the relationships mapping the trade units between the logistic units received and the units dispatched.

A.5 Dealing with missing information

Given the complexity of many fish distribution chains and that there may be many small food businesses involved, and that the Tracefish scheme is voluntary, the reality that the full information will not be available from all sources will have to be accounted for. Businesses may be dependant on suppliers who have not generated and held the required information.

This is likely to apply in particular to imports from third countries, upon which Europe is now very much dependant. The full history of these imported supplies may be complex and uncertain and may involve many remote food businesses. Even within Europe, fish may not pass along pre-ordained routes and may change hands many times. For example, it is quite common for the ownership of fish bought on an auction market to change after the auction and before the fish has left the market. It may be tipped into different boxes and be

mixed in that process. During distribution, fishery products may be transferred between food business operators at the roadside. If some of the food business operators involved do not participate in the Tracefish scheme or do not record the proper information, then full chain traceability may be lost.

However, it is also likely that the major businesses in the distribution chains will, for their own commercial reasons, require chain traceability and hence insist that all the food business operators in their supply and dispatch chains sign up to this. Therefore, in time, commercial pressure is expected to reduce this problem.

Supplies from outside of the Tracefish domain may be raw materials or products and may be brought in by businesses trading at various stages in the distribution chains. Raw materials from outside of the Tracefish domain will include ingredients to be incorporated into added value fishery products, such as spices and other types of foods, whose production and distribution chains are not covered by the Tracefish scheme.

To deal with this it is required that:

- a business that brings in fish and materials from outside of the Tracefish domain is responsible for generating and holding the information required on the units brought in (and if those units are traded onward, for labelling them with the required IDs);
- and that the information required on the units brought in consists of the essential attributes of those units that would normally have been generated and held for that type of unit by that stage in the distribution chain.

A.6 Dealing with the security, rights of access and supply of information

Clearly the food businesses will not wish to make all this traceability information publicly available, particularly not to their competitors or even in many instances to their own suppliers and outlets. Even the fundamental traceability information has considerable commercial value, as open access to it would reveal a business's suppliers, markets and trading patterns. Therefore, there is a need to consider the rights to information and the control of access to it.

The rights of the various authorities to the fundamental traceability and specifically required information are prescribed in law. Food business operators have a right to some of the specifically required information that the law requires to be passed on. They will also have a legal right to relevant fundamental traceability information when engaged in withdrawal or recall procedures, but not otherwise. There are no rights to the commercially desirable information other than those agreed or contracted between trading partners.

However, in practice there is considerable and increasing commercial pressure to provide information. Trade with much of the corporate food industry is now subject to suppliers and distributors agreeing to quality assurance standards and traceability requirements, including the holding or the supply of the associated information.

To achieve commercial acceptance, the Tracefish information specifications are for the generation and holding of information, not for the dissemination of that information. The food businesses remain, in effect, the owners of their information. The passing on of information, other than that prescribed by law, remains a matter of commercial policy or commercial agreement between businesses. The establishment of the information specifications will, of course, ensure that the necessary information is available, and the technical specification will facilitate the communication of the information when required.

The business solutions built on the specifications will require secure business to business handshaking protocols to ensure that only those with a legitimate reason can gain access, and then only to the particular information on the particular units to which they have a right.

A consequence of this is that the information desired by the trade to be visible at the various transaction points in the distribution chains will not necessarily be available, unless there are commercial arrangements for that information to be passed on through the chains from the businesses that generated it. It is strongly recommended that such arrangements are made, but that is not part of the Tracefish scheme.

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