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In order to promote public education and public safety, equal justice for all, a better informed citizenry, the rule of law, world trade and world peace, this legal document is hereby made available on a noncommercial basis, as it is the right of all humans to know and speak the laws that govern them.

EAST AFRICAN STANDARD

Fish handling, processing and distribution — Code of practice

Part 2:

Code of hygiene for the handling, processing, storage and the placing of fish and fishery products

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to achieve this objective, the Partner States in the Community through their National Bureaux of Standards, have established an East African Standards Committee.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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Introduction

This East Africa Code of hygiene practice for the handling, processing, storage and the placing on the market of fish and fishery products was prepared by the East Africa Standards Committee.

This Code applies to fish for human consumption and sets out in the document the treatment that shall be applied to fish from the time it is taken from source through all stages, in order that it reaches the consumer, whether on the home market or export market in to quality condition.

Hygiene is of major importance in maintaining quality. For this reason the materials stipulated for the construction of the plant and equipment are those that are easy to clean and specific procedures for cleaning and sanitizing are also given. Personal hygiene is equally important and fish handlers shall be meticulous in this respect.

This East Africa Code is essentially an adoption of EU Directive 91/493/EEC, laying down the health conditions for the production and the placing on the market of fishery products, with modifications to meet the East African Region export and import requirements.
Fish handling, processing and distribution — Code of practice

Part 2:
Code of hygiene for the handling, processing, storage and the placing of fish and fishery products

1 Scope

This East Africa Code of hygienic practice for the handling, processing, storage and the placing on the market of fish and fishery products lays down the health conditions for the production and the placing on the market of fish and fishery products for human consumption.

2 Definitions

For the purposes of this Code, the following definitions shall apply:

2.1 fishery products
all seawater or freshwater animals or parts thereof, including their eggs, excluding aquatic mammals, frogs and aquatic animals covered by other relevant National Standards

2.2 aquaculture products
all fishery products born and raised in controlled conditions until placed on the market as a foodstuff. However, seawater or freshwater fish or crustaceans caught in their natural environment when juvenile and kept until they reach the desired commercial size for human consumption is also considered to be aquaculture products. Fish and crustaceans of commercial size caught in their natural environment and kept alive to be sold at a later date are not considered to be aquaculture products if they are merely kept alive without any attempt being made to increase their size or weight.

2.3 chilling
the process of cooling fishery products to a temperature approaching that of melting ice.

2.4 fresh products
any fishery product whether whole or prepared, including products packaged under vacuum or in a modified atmosphere, which have not undergone any treatment to ensure preservation other than chilling

2.5 prepared products
any fishery product, which has undergone an operation affecting its anatomical wholeness, such as gutting, heading, slicing, filleting, chopping, etc

2.6 processed products
any fishery product which has undergone a chemical or physical process such as the heating, smoking, salting, dehydration or marinating, etc, of chilled or frozen products, whether or not associated with other foodstuffs, or a combination of these various processes

2.7 preserve
the process whereby products are packaged in hermetically sealed containers and subjected to heat treatment to the extent that any micro-organisms that might proliferate are destroyed or inactivated, irrespective of the temperature at which the product is to be stored
2.8 frozen products
any fishery products, which has undergone a freezing, process to reach a core temperature of -18 °C or lower after temperature stabilization

2.9 packaging
the procedure of protecting fishery products by a wrapper, a container or any other suitable device

2.10 batch
the quantity of fishery products obtained under practically identical circumstances

2.11 consignment
the quantity of fishery products bound for one or more customers in the country of destination and conveyed by one means of transport only

2.12 means of transport
those parts set aside for goods in automobile vehicles, rail vehicles and aircraft, the holds of vessels, and containers for transport by land, sea or air

2.13 competent authority
the central authority in each East African Country competent to carry out health checks or any authority to which it has delegated that competence. Competent authority shall consist of Ministry of Health or any other approved organization as the central authority, with the National Standards Body and any other delegated authorities.

2.14 establishment
any premises where fishery products are prepared, processed, chilled, frozen, packaged or stored. Auction and wholesale markets in which only display and sale by wholesale takes place are not deemed to be establishments.

2.15 placing on the market
the holding or displaying for sale, offering for sale, selling, delivering or any other form of placing on the market in the East African Countries and export market of small quantities by fishermen to retailers or consumers

2.16 importation
the introduction into East African countries of fishery products from other countries

2.17 exportation
transfer of East African fish and fishery products to other countries

2.18 clean seawater
seawater or briny water which is free from microbiological contamination, harmful substances and/or toxic marine plankton in such quantities as may affect the health quality of fishery products and which is used under the conditions laid down in this Code
2.19

factory vessel

any vessel on which fishery products undergo one or more of the following operations followed by packaging: filleting, slicing, skinning, mincing, freezing or processing

The following are not deemed to be “factory vessels”:

— Fishing vessels in which only shrimps and molluscs are cooked on board;
— Fishing vessels on board which only freezing is carried out.

3  Requirements

3.1  Placing of fishery products on the market

3.1.1  They shall have:

a)  Been caught and, where appropriate handled for bleeding, heading gutting and the removal of fins, chilled or frozen, on board vessels in accordance with the relevant National Standards.

b)  Where appropriate, been handled in factory vessels approved by competent authority and in accordance with the requirements of Chapter I of the Annex.

The cooking of shrimps and molluscs on board shall comply with the provisions of Chapter III section I (5) and Chapter IV, section IV (7), of the Annex. Such vessels shall be specifically registered by the competent authorities.

3.1.2  During and after landing they shall have been handled in accordance with Chapter II of the Annex.

3.1.3  They shall have been handled and, where appropriate, packaged, prepared, processed, frozen, defrosted or stored hygienically in establishments approved in accordance with Clause 4, in compliance with the requirements of Chapters III and IV of the Annex.

The competent authority may, notwithstanding Chapter II, section 2 of the Annex, authorize the transfer of fishery products ex quay into containers for immediate delivery to an approved establishment or registered auction or wholesale market to be checked there.

3.1.4  They shall have undergone a health check in accordance with Chapter V of the Annex.

3.1.5  They shall have been appropriately packaged in accordance with Chapter VI of the Annex

3.1.6  They shall have been given an identification mark in accordance with Chapter VII of the Annex.

3.1.7  They shall have been stored and transported under satisfactory conditions of hygiene, in accordance with Chapter VIII of the Annex.

3.2  Where gutting is possible from a technical and commercial viewpoint, it shall be carried out as quickly as possible after the products have been caught or landed.

3.3  The placing on the market of aquaculture products shall be subject to the following conditions:

3.3.1  They shall have been slaughtered under appropriate conditions of hygiene. They shall not be soiled with earth, slime, faeces or any other foreign matter. If not processed immediately after having been slaughtered, they shall be kept chilled.

3.3.2  They shall, in addition, comply with the requirements laid down under 3.1.3 to 3.1.7.
3.4 The placing on the market of live bivalve molluscs shall be subject to the relevant National Standard.

3.4.1 when processed, bivalve molluscs shall, in addition to the requirements in 3.4 comply with those of 3.1.3 to 3.1.7.

3.5 Fishery products to be placed on the market alive shall at all times be kept under the most suitable survival conditions.

3.6 The placing on the market of the following products shall be forbidden:

i) Poisonous fish of the following families: Tetraodontidae, Molidae, Diodontidae, Canthigasteridae,

ii) Fishery products containing biotoxins such as ciguatera, scromboid toxins or muscle-paralysing toxins.

3.6.1 Detailed requirements concerning the species covered by this clause and concerning methods of analysis shall be as laid down in respective National Standards.

3.7 The competent authority shall ensure that persons responsible for establishment take all necessary measures, so that, at all stages of the production of fishery products, the specifications of this Code are complied with.

3.7.1 To ensure this, the said persons responsible shall carry out their own checks based on the following principles:

i) Identification of critical points in their establishment on the basis of the manufacturing process used;

ii) Establishment and implementation of methods for monitoring and checking such critical points.

iii) Taking samples for analysis in an approved laboratory by the competent authority for the purpose of checking, cleaning and disinfection methods and for the purpose of checking compliance with the standards established by this Code.

iv) Keeping a written record or a record registered in an indelible fashion of the preceding points with a view to submitting them to the competent authority. The results of the different checks and tests will in particular be kept for a period of at least two years.

3.8 If the results of own checks or any information at the disposal of the persons responsible referred to in 3.7 reveal the risk of a health risk or suggest one might exist and without prejudice to the measures laid down in this Code appropriate measures shall be taken under official supervision.

3.9 Rules for the application of 3.7.1 shall be established in accordance with the relevant National Standards.

4 Approval

4.1 Fish and fishery products processing establishments and factory vessels shall be required to avail written evidence of approval in compliance with requirements of the relevant National Legislations.

4.1.1 In case such requirements cease to be complied with the necessary measures shall be taken in line with Clause 5 of this Code.

4.1.2 The auction, retail and wholesale markets which are not subject to approval may be registered subject to verification that such installations comply with provisions of this Code.

4.2 The establishments shall be required to be on the list of the approved establishments against official numbers for purpose of identification and monitoring in accordance to this Code.
4.3 Joint inspections by the competent authority (Ministry of Health, National Standards Body and other relevant organizations) shall be carried out regularly and the competent authority shall have free access to all parts of establishments to ensure compliance with the requirements of this Code.

4.4 The establishments shall at all times be required to comply with the provisions of this Code.

4.5 The establishments shall seek approval and renewal of approvals.

4.6 4.1, 4.3, 4.4 and 4.5 shall also apply in respect to factory vessels.

4.7 4.3, 4.4 and 4.5 shall also apply to retail, wholesale and auction markets.

5 Third party assessment

5.1 The establishment and factory vessels shall be subjected to any interested third party assessment in co-operation with the competent authority for compliance with this Code.

6 Application of rules in this Code

The rules laid down in this Code, as regards fishery products intended for human consumption, shall also apply, in particular as regards the organization of and the action to be taken following the inspections to be carried out by the competent authority and the protective measures to be implemented.

7 Exports

Provisions applied to exports of fish and fishery products from East African countries shall be at least equivalent to those governing the production and placing on the East African Regional market.

7.1 Fish and fishery products caught in their natural environment by a fishing vessel flying the flag of another country other than the East African Countries shall undergo the checks laid down in this Code.

7.2 Fishery products from East African Countries shall fulfil the specific export conditions fixed in accordance with the procedures laid down in this Code and other requirements of the other relevant National Legislations.

7.3 In order to verify the conditions of production, storage and dispatch of fishery products for export, inspections may be carried out on the spot by any interested party in accordance to requirements of this Code, and other relevant National Legislations.

7.4 The frequency of and procedures for inspections shall be determined jointly by the National Standards Body, Ministry of Health and other relevant National Organizations.

7.5 Certificate of compliance shall be issued for each consignment for export in accordance with the requirements of this Code.

8 Imports

8.1 Provisions applied to imports of fish and fishery products shall be at least equivalent to those governing the production and placing on the market of East African Regional products.

8.1.1 Fish and fishery products caught in their natural environment by a fishing vessel flying the flag of another country other than the East African countries shall undergo the checks laid down in this Code.
8.2 For each exporting country or group of exporting countries fish and fishery products shall fulfil the specific import conditions fixed in accordance with the procedure laid down for import quality inspection.

8.3 In order to allow the import conditions to be fixed, and in order to verify the conditions of production, storage and dispatch of fishery products for consignment to East African Countries, inspection shall be carried out on the spot by the competent authority and quality export/import inspectors.

8.4 When fixing the import conditions for fish and fishery products referred to in 8.2, particular account shall be taken of:

i) The organization of the competent authority of the third country and of its inspection services, the powers of such services and the supervision to which they are subject, as well as their facilities for effectively verifying the implementation of their legislation in force.

ii) The actual health conditions during the production, storage and dispatch of fishery products intended for East African Countries.

iii) The assurances, which the exporting country can give on, the compliance with the standards laid down in Chapter V of the Annex.

8.5 The import conditions shall include:

i) The procedure for obtaining a health certificate, which shall accompany consignments when forwarded to East African Countries.

ii) The placing of a mark identifying the fishery products, in particular with the approval number of the establishment of origin, except in the case of frozen fishery products, landed immediately for canning and bearing the certificate provided for under (i).

iii) Drawing up a list of approved establishments and auction or wholesale markets registered and approved by the competent authority of the Country of origin.

8.6 The conditions referred to in 8.5 (i) and (ii) may be modified in accordance with relevant National Standards.

This list referred to in 8.5 (iii) may be amended by each East African Country’s Government, in accordance with the Laws established by the Government.

8.7 Pending the fixing of the import conditions referred to in 8.2, the competent authority shall ensure that the conditions applied to imports of fishery products from exporting countries shall be at least equivalent to those governing the production and placing on the markets of East African products.
Annex Specific applicable conditions

Chapter I — Conditions applicable to factory vessels

I. Conditions concerning design and equipment

1. The minimum requirements for factory vessels are as follows:

(a) A reception area set aside for taking fishery products on board, designed and arranged into pounds or pens that are large enough to allow each successive catch to be separated. The respective area and its movable parts shall be easy to clean. It shall be designed in such a way as to protect the products from the sun or the elements and from any source of dirt or contamination.

(b) A system for conveying fishery products from the reception area to the work area that conforms to rules of hygiene.

(c) Work areas that are large enough for the preparation and processing of fishery products in proper conditions of hygiene. They shall be designed and arranged in such a way as to prevent any contamination of the products.

(d) Storage areas for the finished products that are large enough and designed so that they are easy to clean. If a waste-processing unit operates on board, a separate hold shall be designated for the storage of these by-products.

(e) A place for storing packaging materials that is separate from the product preparation and processing areas.

(f) Special equipment for pumping waste of fishery products that are unfit for human consumption either directly into the sea or, where circumstance so require, into a watertight tank reserved for that purpose. If waste is stored and processed on board with a view to cleaning, separate areas shall be allocated for that purpose.

(g) Potable water complying with EAS 12 East African Standard Specification for drinking water.

2. Areas used for the preparation and processing or freezing of fishery products shall have:

(a) A non-slip floor that is also easy to clean and disinfect and equipped for easy drainage of water. Structures and fixtures shall have limber holds that are large enough not to be obstructed by fish waste and to allow water to drain freely;

(b) Walls and ceilings that are easy to clean, particularly where there are papers, chains or electricity conduits;

(c) The hydraulic circuits arranged or protected in such a way as to ensure that it is not possible for any leakage of oil to contaminate fishery products;

(d) Adequate ventilation and, where necessary, proper vapour extraction;

(e) Adequate lighting;

(f) Appliances for cleaning and disinfecting tools, equipment and fittings;

(g) Appliances for cleaning and disinfecting the hands with taps that are not hand-operable and with single use towels.

3. Equipment and tools such as cutting benches, containers, conveyors, gutting or filleting machines, etc., shall be resistant to seawater corrosion, easy to clean and disinfect and well maintained.
4. Factory vessels, which freeze fishery products, shall have:

(a) A refrigeration plant sufficiently powerful to lower the temperature rapidly so as to achieve a core temperature that complies with the specifications of this Code;

(b) Refrigeration plant sufficiently powerful to keep fishery products in the storage holds at a temperature that complies with the specifications of this Code. These storage holds shall be equipped with a temperature recording system placed so that it can easily be consulted.

II. Conditions of hygiene relating on-board handling and storage of fishery products

1. A qualified person on board the factory vessel shall be responsible for applying good fishery products manufacturing practices. That person shall have the authority to ensure that the provisions of this Code are applied and shall make available to inspectors the programme for inspecting and checking critical points as applied on board, a register containing that person’s comments and the temperature recordings that may be required.

2. The general conditions of hygiene applicable to areas and equipment shall be those laid down in Chapter III, section II (A) of this Annex.

3. The general conditions of hygiene applicable to staff shall be those laid down in Chapter III, section II (B) of this Annex.

4. Heading, gutting and filleting shall be carried out under the conditions of hygiene laid down in Chapter IV, section 1 (2), (3) and (4) of this Annex.

5. On-board processing of fishery products shall be carried out under the conditions of hygiene laid down in Chapter IV, sections III, IV and V of this Annex.

6. Fishery products shall be wrapped and packaged under the conditions of hygiene laid down in Chapter VI of this Annex.

7. On-board storage of fishery products shall be carried out under the conditions of hygiene laid down in Chapter VIII, points 1, and 2, of this Annex.

Chapter II — Requirements during and after landing

1. Unloading and landing equipment shall be constructed of material, which is easy to clean and disinfect, and shall be kept in a good state of repair and cleanliness.

2. During unloading and landing, contamination of fishery products shall be avoided. It shall in particular be ensured that -

   — Unloading and landing operations proceed rapidly;

   — Fishery products are placed without unnecessary delay in a protected environment at the temperature required on the basis of the nature of the product and, where necessary, in ice in transport, storage or market facilities, or in an establishment;

   — Equipment and handling practices that cause unnecessary damage to the edible parts of the fishery products are not authorized.

3. Auction markets where fishery products are displayed for sale shall -

   (a) Be covered and have walls, which are easy to clean;

   (b) Have waterproof flooring, which is easy to wash and disinfect and laid in such a way as to facilitate the drainage of water and have a hygienic wastewater disposal system;
(c) Be equipped with sanitary facilities with an appropriate number of washbasins and flush lavatories. Washbasins shall be supplied with materials for cleaning the hands and single use hand towels;

(d) Be well lit to facilitate the inspection of fishery products provided for in Chapter V of this Annex;

(e) When they are used for display or storage of fishery products, not be used for other purposes; vehicles emitting exhaust fumes which may impair the quality of the fishery products not be admitted to markets; undesirable animals shall not be admitted;

(f) Be cleaned regularly and at least after each sale; crates shall be cleaned and rinsed inside and outside with drinking water or clean seawater; where required, they shall be disinfected;

(g) Have displayed in a prominent position signs prohibiting smoking, spitting, eating and drinking;

(h) Be closable and be kept closed when the competent authority considers it necessary;

(i) Have facilities to provide adequate water supplies complying with the conditions laid down in Chapter III, section 1, and point 7 of this Annex.

(j) Have special watertight receptacles made of corrosion-resistant materials for fishery products which are unfit for human consumption;

(k) In so far as they do not have their own premises on-the-spot or in the immediate vicinity on the basis of the quantities displayed for sale, have, for the purposes of the competent authority, an adequately equipped lockable room and the equipment necessary for carrying out inspections.

4. After landing or, where appropriate, after first sale, fishery products shall be transported without delay, under the conditions laid down in Chapter VIII, of this Annex, to their place of destination.

5. However, if the conditions laid down in point 4 are not fulfilled, the markets in which fishery products may be stored before being displayed for sale or after being sold and pending transport to their place of destination shall have sufficiently large cold rooms which comply with the conditions laid down in Chapter III, section I, point 3 of this Annex. In such cases, fishery products shall be stored at a temperature approaching that of melting ice.

6. The general conditions of hygiene laid down in Chapter III, section II - with the exception of point B 1(a) - of this Annex shall apply mutatis mutandis to the markets in which fishery products are displayed for sale or stored.

7. The wholesale markets in which fishery products are displayed for sale or stored shall be subject to the same conditions as those laid down in points 3 and 5 of this Chapter and to those set out in points 4, 10 and 11 of Chapter III, section 1 of this Annex.

The general conditions of hygiene laid down in Chapter III, section II of this Annex shall apply mutatis mutandis to wholesale markets.

Chapter III — General conditions for establishments on land

I. General conditions relating to premises and equipment

Establishments shall afford at least the following facilities:

1. Working areas of sufficient size for work to be carried out under adequate hygienic conditions. Their design and layout shall be such as to preclude contamination of the product and keep quite separate the clean and contaminated parts of the building.
2. In areas where products are handled, prepared and processed -

(a) Waterproof flooring, which is easy to clean and disinfect and laid down in such a way as to facilitate the drainage of the water or provided with equipment to remove water;

(b) Walls, which have smooth surfaces and are easy to clean, durable and impermeable;

(c) Ceilings or roof linings which are easy to clean;

(d) Doors in durable materials, which are easy to clean;

(e) Adequate ventilation and, where necessary, good steam and water-vapour extraction facilities;

(f) Adequate natural or artificial lighting;

(g) An adequate number of facilities for cleaning and disinfecting hands. In work rooms and lavatories taps shall not be hand-operable. These facilities shall be provided with single use hand towels;

(h) Facilities for cleaning plant, equipment and utensils.

3. In cold rooms where fishery products are stored:

— The provisions set out under point 2(a), (b), (c), (d) and (f);

— Where necessary, a sufficiently powerful refrigeration plant to keep products at temperature prescribed in this Code.

4. Appropriate facilities for protection against pests such as insects, rodents, birds, etc.

5. Instruments and working equipment such as cutting tables, containers, conveyor belts and knives made of corrosion-resistant materials, easy to clean and disinfect.

6. Special watertight, corrosion-resistant containers for fishery products not intended for human consumption and premises for the storage of such containers if they are not emptied at least at the end of each working day.

7. Facilities to provide adequate supplies of drinking water within the meaning of East African Standards or alternatively of clean seawater treated by an appropriate system, under pressure and in sufficient quantity. However, by way of exception, a supply of non-drinking water is permissible for the production of steam, fire-fighting and the cooling of refrigeration equipment, provided that the pipes installed for the purpose preclude the use of such water for other purposes and present no risk of contamination of the products. Non-drinking-water pipes shall be clearly distinguished from those used for drinking water or clean seawater.

8. Hygienic wastewater disposal system.

9. An adequate number of changing rooms with smooth, waterproof, washable walls and floors, wash basins and flush lavatories. The latter may not open directly onto the workrooms. The washbasins shall have materials for cleaning the hands and disposal towels; the washbasin taps shall not be hand-operable.

10. If the volume of products treated requires regular or permanent presence an adequately equipped lockable room for the exclusive use of the inspection service.

11. Adequate facilities for cleaning and disinfecting means of transport. However, such facilities are not compulsory if there is a requirement for the means of transport to be cleaned and disinfected at facilities officially authorized by the competent authority.
12. Establishments keeping live animals such as crustaceans and fish shall have appropriate fittings ensuring the best survival conditions provided with water of a quality such that no harmful organisms or substances are transferred to the animals.

II. General conditions of hygiene

A General conditions of hygiene applicable to premises and equipment

1. Floors, walls and partitions, ceilings or room linings, equipment and instruments used for working on fishery products shall be kept in a satisfactory state of cleanliness and repair, so that they do not constitute a source of contamination for the products.

2. Rodents, insects and any other vermin shall be systematically exterminated in the premises or on the equipment; rodenticides, insecticides, disinfectants and any other potentially toxic substances shall be stored in premises or cupboards which can be locked; their use shall not present any risk of contamination of the products.

3. Working areas, instruments and working equipment must be used only for work on fishery products. However, following authorization by the competent authority they may be used at the same time or other times for work on other foodstuffs.

4. Drinking water, complying with East Africa Standards or clean seawater shall be used for all purposes. However, by way of an exception, non-drinking water may be used for steam production, fire-fighting and the cooling of refrigeration equipment, provided that the pipes installed for the purpose preclude the use of such water for other purposes and present no risk of contamination of the products.

5. Detergents, disinfectants and similar substances shall be approved by the competent authority and used in such a way that they do not have adverse effects on the machinery, equipment and products.

B General conditions of hygiene applicable to staff

1. The highest possible standard of cleanliness is required of staff. More specifically:

   (a) Staff shall wear suitable clean working clothes and headgear, which completely encloses the hair. This applies particularly to persons handling exposed fishery products.

   (b) Staff assigned to the handling and preparation of fishery products shall be required to wash their hands at least each time work is resumed; wounds to the hands must be covered by a waterproof dressing.

   (c) Smoking, spitting, eating and drinking in work and storage premises of fishery products shall be prohibited.

2. The employer shall take all the requisite measures to prevent persons liable to contaminate fishery products from working on and handling them, until there is evidence that such persons can do so without risk.

When recruited, any person working on and handling fishery products shall be required to prove, by a medical certificate, that there is no impediment to such employment. The medical supervision of such a person shall be governed by the relevant National legislation.

Chapter IV — Special conditions for handling fishery products onshore

I. Conditions for fresh products

1. Where chilled, unpackaged products are not dispatched, prepared or processed immediately after reaching the establishment, they shall be stored or displayed under ice in the establishment’s cold room. Re-icing shall be carried out as often as is necessary; the ice used, with or without salt, shall be made from drinking water or clean seawater and be stored under hygienic conditions in receptacles provided for the purpose; such receptacles shall be kept clean and in a good state of
repair. Pre-packaged fresh products shall be chilled with ice or mechanical refrigeration plant creating similar temperature conditions.

2. If they are not carried out on board, operations such as heading and gutting shall be carried out hygienically. The products shall be washed thoroughly with drinking water or clean seawater immediately after such operations.

3. Operations such as filleting and slicing shall be carried out in such a way as to avoid the contamination or spoilage of fillets and slices, and in a place other than that used for heading and gutting operations. Fillets and slices shall not remain on worktables any longer than is necessary for their preparation. Fillets and slices to be sold fresh shall be chilled as quickly as possible after preparation.

4. Guts and parts that may constitute a danger to public health shall be separated from and removed from the vicinity of products intended for human consumption.

5. Containers used for the dispatch or storage of fresh fishery products shall be designed in such a way as to ensure both their protection from contamination and their preservation under sufficiently hygienic conditions and, more particularly, they shall provide adequate drainage of melt water.

6. Unless special facilities are provided for the continuous disposal of waste, the latter shall be placed in leak proof, covered containers, which are easy to clean and disinfect. Waste shall not be allowed to accumulate in working areas. It shall be removed either continuously or as soon as the containers are full and at least at the end of each working day in the containers or to the premises referred to in Chapter III, section I, paragraph 6 of this Annex. The containers, receptacles and/or premises set aside for waste shall always be thoroughly cleaned and, if appropriate, disinfected after use. Waste stored there shall not constitute a source of contamination for the establishment or of pollution of its surroundings.

II. Conditions for frozen products

1. Plants shall have:
   (a) Freezing equipment sufficiently powerful to achieve a rapid reduction in the temperature so that the temperatures laid down to in this Code can be obtained in the products;
   (b) Freezing equipment sufficiently powerful to keep products in storage rooms at a temperature not exceeding those laid down in this Code, whatever the ambient temperature may be.

   However, for technical reasons related to the method of freezing and to the handling of such products, for whole fish frozen in brine and intended for canning, higher temperatures than those laid down in this Code are acceptable although they may not exceed -9°C.

2. Fresh products to be frozen or quick-frozen shall comply with the requirements of section I, of this Chapter, and the relevant National Standards, Specification for fresh water finfish, Fresh whole fish and Fresh fish fillet.

3. Storage rooms shall have a temperature-recording device in a place where it can easily be read. The temperature sensor of the recorder shall be located in the area furthest away from the cold source, i.e. where the temperature in the storage room is the highest.

   Temperature charts shall be available for inspection by the supervisory authorities at least during the period in which the products are stored.

III. Conditions for thawing products

Establishments that carry out thawing operations shall comply with the following requirements:

1. Fishery products shall be thawed under hygienic conditions; their contamination shall be avoided and there shall be adequate drainage for any melt water produced.
During thawing, the temperature of the products shall not increase excessively.

2. After thawing, fishery products shall be handled in accordance with the requirements of this Code. When they are prepared or processed, these operations shall be carried out without delay. If they are put directly onto the market, particulars as to the thawed state of the fish shall be clearly marked on the packaging in accordance with EAS 38 and relevant National Standards for Fishery products.

IV. Conditions for processed products

1. Fresh, frozen and thawed products used for processing shall comply with the requirements of section I or II of this Chapter.

2. Where the processing treatment is carried out to inhibit the development of pathogenic micro-organisms, or if it is a significant factor in the preservation of the product, the treatment shall be scientifically recognized and approved by the Central Authority.

The person responsible for an establishment shall keep a register of the processing carried out. Depending on the type of process employed, heating time and temperature, salt content, pH, water content, etc., shall be monitored and controlled. Records shall be kept at least for the expected storage life of the products and be available to the competent authority.

3. For products which are preserved for a limited period by a treatment such as salting, smoking, drying or marinading, the appropriate conditions for storage shall be clearly marked on the packaging, in accordance with EAS 38.

In addition, the following conditions shall be complied with:

4. Canning

In the case of fishery products, which have been subjected to sterilization in hermetically, sealed containers:

(a) The water used for the preparation of cans shall be drinking water;

(b) The process used for the heat treatment shall be appropriate, having regard to such major criteria as the heating time, temperature, filling, size of containers, etc., a record of which shall be kept; the heat treatment shall be capable of destroying or inactivating pathogenic organisms and the spores of pathogenic micro-organisms. The heating equipment shall be fixed with devices for verifying whether the containers have in fact undergone appropriate heat treatment. Drinking water shall be used to cool containers after heat treatment without prejudice to the presence of any chemical additives used in accordance with good technological practice to prevent corrosion of the equipment and containers;

(c) Further checks shall be carried out at random by the manufacturer to ensure that the processed products have undergone appropriate heat treatment, viz:

   — **Incubation tests**: incubation shall be carried out at 37 °C for seven days or at 35 °C for ten days, or at any other equivalent combination;

   — **Microbiological examination** of contents and containers in the establishment’s laboratory or in another approved laboratory;

(d) Samples shall be taken of production each day at predetermined intervals, to ensure the efficacy of sealing. For that purpose, appropriate equipment shall be available for the examination of cross-sections of the can seams;

(e) Checks are carried out in order to ensure that containers are not damaged;
(f) All containers, which have undergone heat treatment under practically identical conditions, shall be given a batch identification mark.

5. Smoking

Smoking shall be carried out in separate premises or a special place equipped, if necessary, with a ventilation system to prevent the smoke and heat from the combustion from affecting other premises or places where fishery products are prepared, processed or stored.

(a) Materials used to produce smoke for the smoking of fish shall be stored away from the place of smoking and shall be used in such a way that they do not contaminate the products.

(b) Materials used to produce smoke by burning wood that has been painted, varnished, glued or has undergone any chemical preservation treatment shall be prohibited.

(c) After smoking, products shall be cooled rapidly to the temperature required for their preservation before being packaged.

6. Salting

(a) Salting operations shall take place in different premises, sufficiently removed from the premises where the other operations are carried out.

(b) Salt used in the treatment of fishery products shall be clean and stored in such a way as to preclude contamination. It shall not be re-used.

(c) Any container used for salting or brining shall be constructed in such a way as to preclude contamination during the salting or brining process.

(d) Containers or areas used for salting or brining shall be cleaned before used.

7. Cooked crustacean and molluscan shellfish products

Crustaceans and molluscan shellfish shall be cooked as follows:

(a) Any cooking shall be followed by rapid cooling. Water used for this purpose shall be drinking water or clean seawater. If no other method of preservation is used, cooling shall continue until the temperature approaching that of melting ice is reached.

(b) Shelling or shucking shall be carried out under hygienic conditions avoiding the contamination of the product. Where such operations are done by hand, workers shall pay particular attention to the washing of their hands and all working surfaces shall be cleaned thoroughly. If machines are used, they shall be cleaned at frequent intervals and disinfected after each working day.

    After shelling or shucking, cooked products shall immediately be frozen or kept chilled at a temperature, which will preclude the growth of pathogens, and be stored in appropriate premises.

(c) Every manufacturer shall carry out microbiological checks on his production at regular intervals, complying with respective fishery products National Standards.

8. Mechanically recovered fish flesh

The mechanical recovery of fish flesh shall be carried out under the following conditions:

(a) Mechanical recovery of gutted fish shall take place without undue delay after filleting, using raw materials free of guts. Where whole fish are used, they shall be gutted and washed beforehand.

(b) The machinery shall be cleaned at frequent intervals and at least every two hours.
(c) After recovery, mechanically recovered flesh shall be frozen as quickly as possible or incorporated in a product intended for freezing or stabilizing treatment.

V Conditions concerning parasites

1. During production and before they are released for human consumption, fish and fish products shall be subject to a visual inspection for the purpose of detecting and removing any parasites that are visible.

Fish or parts of fish which are obviously infested with parasites, and which are removed, shall not be placed on the market for human consumption.

The detailed rules for this inspection shall be adopted in accordance with the procedure laid down in this Code.

2. The fish and fish products referred to in point 3 which are to be consumed as they are, shall, in addition, be subjected to freezing at a temperature of not more than –20 °C in all parts of the product for not less than 24 hours. Products subjected to this freezing process shall be either raw or finished.

3. Fish and products subject to the conditions in point 2:
   (a) Fish to be consumed raw or almost raw, e.g. raw herring 'maatje'
   (b) The following species, if they are to undergo a cold smoking process at which the internal temperature of the fish is less than 60 °C:
      — Herring,
      — Mackerel,
      — Sprat,
      — (Wild) Atlantic and Pacific salmon.
   (c) Marinated and/or salted herring where this process is insufficient to destroy the larvae of nematodes.

4. Manufacturers shall ensure that fish and fish products listed in point 3 or the raw materials for use in their manufacture are subjected to the treatment described in point 2, prior to their release for consumption.

5. The fishery products listed in point 3 shall, when they are placed on the market, be accompanied by a document from the manufacturer stating the type of process they have undergone.

Chapter V — Health control and monitoring of production conditions

I. General monitoring

Arrangements for checking and monitoring shall be made by the competent authorities in order to establish whether the requirements laid down in this Code are complied with:

Such arrangements will include, in particular:

1. A check on the fishing vessels, on the understanding that such a check may be carried out during the stay in port;
2. A check on the conditions of landing and first sale;
3. An inspection of regular intervals of establishments to check, in particular:
(a) Whether the conditions for approval are still fulfilled;
(b) Whether the fishery products are handled correctly.
(c) The cleanliness of the premises, facilities and instruments and staff hygiene;
(d) Whether identification marks are put on correctly;

4. An inspection of the wholesale and auction markets;
5. A check on storage and transport conditions.

II Special checks

1. Organoleptic checks

The organoleptic examination shall be repeated after the first sale of fishery products, if it is found that the requirements of this Code have not been complied with or when considered necessary. After the first sale, fishery products shall at least comply with the minimum freshness requirements in accordance with relevant fishery products National Standards.

If the organoleptic examination reveals that the fishery products are not fit for human consumption, measures shall be taken to withdraw them from the market and denature in such a way that they cannot be re-used for human consumption.

If the organoleptic examination reveals any doubt as to the freshness of the fishery products, use may be made of chemical checks or microbiological analysis.

2. Parasite checks

Before they are released for human consumption, fish and fishery products shall be subjected to a visual inspection, by way of sample, for the purpose of detecting any parasites that are visible.

Fish or parts of fish which are obviously infested with parasites, and which are removed, shall not be placed on the market for human consumption.

3. Chemical checks

A Samples shall be taken and subjected to laboratory analysis for the control of the following parameters:

(a) TVB-N (Total Volatile Basic Nitrogen) and TMA-N (trimethylamine-Nitrogen)

The levels of these parameters shall be specified for each category of species in accordance with the procedure laid down in relevant National Standards.

(b) Histamine

Nine samples shall be taken from each batch. These shall fulfil the following requirements:

— The mean value shall not exceed 100 ppm.
— Two samples may have a value of more than 100 ppm but less than 200 ppm.
— No sample may have a value exceeding 200 ppm.

These limits apply only to fish species of the following families: Scombridae and Clupeidae. However, fish belonging to these families, which have undergone enzyme-ripening treatment in brine, may have higher histamine levels but not more than twice the above values. Examinations shall be carried out
in accordance with reliable, scientifically recognized methods, such as high-performance liquid chromatography (HPLC).

B Contaminants present in the aquatic environment

Without prejudice to the community rules concerning water protection and management, and in particular those concerning pollution of the aquatic environment, fishery products shall not contain in their edible parts contaminants present in the aquatic environment such as heavy metals and organochlorinated substances at such a level that the calculated dietary intake exceeds the acceptable daily or weekly intake for humans.

A monitoring system shall be established by the relevant authority to check the level of contamination of fishery products.

Chapter VI — Packaging

1. Packaging shall be carried out under satisfactory conditions of hygiene, to preclude contamination of the fishery products.

2. Packaging materials and products liable to enter into contact with fishery products shall comply with all the rules of hygiene, and in particular -

   — They shall not be such as to impair the organoleptic characteristics of the fishery products;
   
   — They shall not be capable of transmitting to the fishery products substances harmful to human health;
   
   — They shall be strong enough to protect the fishery products adequately.

3. With the exception of certain containers made of impervious, smooth and corrosion-resistant material which are easy to clean and disinfect, which may be re-used after cleaning and disinfecting, packaging materials may not be re-used. Packaging materials used for fresh products held under ice shall provide adequate drainage for melt water.

4. Unused packaging materials shall be stored in premises away from the production area and be protected from dust and contamination.

Chapter VII — Identical marks

Consignments of fishery products shall either be labelled or accompanied by documents providing -

   — The country of dispatch;

   — Identification of the establishment by its official approval number or, as indicated in 4.1

Chapter VIII — Storage and transport

1. Fishery products shall, during storage and transport, be kept at the temperatures laid down in this Code and in particular:

   — Fresh or thawed fishery products and cooked and chilled crustacean and molluscan shellfish products shall be kept at the temperature of melting ice;

   — Frozen fishery products, with the exception of frozen fish in brine intended for the manufacture of canned foods, shall be kept at an even temperature of -18 °C or less in all parts of the product, allowing for the possibility of brief upward fluctuations of not more than 3 °C, during transport;
Protected products shall be kept at the temperatures specified by the manufacturer, when the circumstances so require, prescribed in accordance with the procedure laid down in the relevant National Standards.

2. Where frozen fishery products are transported from a cold-storage plant to an approved establishment to be thawed on arrival for the purposes of preparation and/or processing and where the distance to be covered is short, not exceeding 50 km or one hour’s journey, the competent authority may grant a derogation from the conditions laid down in point 1, second indent.

3. Products may not be stored or transported with other products, which may contaminate them or affect their hygiene, unless they are packaged in such a way as to provide satisfactory protection.

4. Vehicles used for the transport of fishery products shall be constructed and equipped in such a way that the temperatures laid down in this Code can be maintained throughout the period of transport. If ice is used to chill the products, adequate drainage shall be provided in order to ensure that water from melted ice does not stay in contact with the products. The inside surfaces of the means of transport shall be finished in such a way that they do not adversely affect the fishery products. They shall be smooth and easy to clean and disinfect.

5. Means of transport used for fishery products may not be used for transporting other products likely to impair or contaminate fishery products, except where the fishery products can be guaranteed uncontaminated as a result of such transport being thoroughly cleaned and disinfected.

6. Fishery products may not be transported in a vehicle or container which is not clean or which should have been disinfected.

7. The transport conditions of fishery products to be placed on the market alive shall not adversely affect the products.

Chapter IX — Points of Annex 1 which may be subject to derogations and possible conditions applicable in the case of derogations

Re Chapter I Part I of the Annex

1. Point 1 (a)

Provided products are sheltered from the sun and the elements and from any source of dirt or contamination.

2. Point 1 (c)

Provided any contamination of the products is prevented.

3. Point 1 (d) first sentence

provided the finished products are stored on board at the required temperature.

4. Point 1 (g) last sentence

provided products cannot be contaminated by wastewater, waste or engine coolant.

5. Point 1 (h)

provided staff handling fishery products can wash their hands after using the toilet.

6. Point 2 (a)

provided floors are properly cleaned and disinfected.
7. Point 2 (b), (c) and (d)
8. Point 2 (g) on taps and towels
9. Point 3
   provided equipment and tools are well maintained.

Re Chapter II of the Annex
10. Point 3 (a) provided the walls are kept clean.
11. Point 3 (b) provided the flooring is kept clean after every sale.
12. Point 3 (c), first sentence
13. Point 3 (e): vehicles emitting exhaust fumes provided products contaminated by exhaust fumes are withdrawn from the market.
14. Point 3 (j) provided that products, which are not fit for human consumption, cannot contaminate or be mixed with fishery products.
15. Point 3 (k)
16. Point 7
   in so far as it refers to point 3 of the same Chapter and point 10 of Chapter III, section I.

Re Chapter III Part I of the Annex.
17. Point 1
   provided finished products cannot be contaminated by raw materials or waste.
18. Point 2 (a)
   provided the flooring is cleaned and disinfected accordingly.
19. Point 2 (b)
   provided the walls are kept clean.
20. Point 2 (c)
   provided the ceiling is not a source of contamination.
21. Point 2 (d)
22. Point 2 (e) provided products cannot be spoilt or contaminated by the steam.
23. Point 2 (g) provided there are facilities available for staff to wash their hands.
24. Point 3
25. Point 5 insofar as it relates to corrosion-resistant materials provided instruments and working equipment are kept clean.
26. Point 6 provided products cannot be contaminated by waste or leakage there from.
27. Point 10
Re Chapter IV of the Annex

28. Part I, Point 1 in respect of the requirement of products being held over to be put in the establishment’s cold room provided the products are re-iced as often as necessary during a period not in excess of 12 hours or that a nearby cold room not belonging to the establishment can be used.

29. Part I, Point 6 in respect of the requirement for waste to be put in leak proof covered containers provided products cannot be contaminated by waste or leakage therefrom.

30. Part IV, Point 5, first paragraph provided that every precaution is taken to prevent fishery products that are being prepared or stored from being affected by the smoke.

31. Part IV, Point 6 (a) provided fishery products that are being prepared or stored are not affected by salting operations.