

S.I. 85 of 2010**EXPORT OF FISHERY PRODUCTS ACT***(Cap 77A)***Export of Fishery Products (By-Products)
Regulations, 2010**

In exercise of the powers conferred by section 13 of the Export of Fishery Products Act, the Minister of Investment, Natural Resources and Industry hereby makes the following Regulations—

- 1.** These Regulations may be cited as the Export of Fishery Products (By-Products) Regulations, 2010. Citation
- 2.** These Regulations shall be in addition to and not in derogation of any other written law for the time being in force relating to food safety and public health. Application
- 3.** In these Regulations the definitions of terms in the Export of Fisheries Products (Sanitary) Regulations, 2010 shall apply in addition to the following definitions— Interpretation

“by-product” means any material or product that is not the primary product of a specific processing operation, yet may be used in the production of secondary products either for human consumption or as an ingredient in the manufacture of other products intended for consumption by humans or the manufacture of animal feeds;

“fishery waste” means material originating from fishery products, whole fish or parts thereof that have been identified as either being potentially harmful to the consumer or of no commercial value and are permanently and irreversibly removed from the human and animal supply chain.

Classification
of Fishery
By-Products

4.(1) Type 1: Fishery By-Products shall consist of parts of fishery products (which are fit for human consumption in accordance with Seychelles legislation), intended for —

- (a) human consumption;
- (b) use as an ingredient in products intended for human consumption;
- (c) use as a raw material that will undergo further processing before being used for either (a) or (b).

(2) Type 2: Fishery By-Products shall be one or more of the following, namely

- (a) whole or parts of fishery products, which are fit for human consumption in accordance with Seychelles legislation, but are not intended for human consumption for commercial reasons;
- (b) former fishery products other than catering waste, which are no longer intended for human consumption for commercial reasons or due to problems of manufacturing or packaging defects or other defects which do not present any risk to humans or animals;
- (c) fishery products that have been declared as unfit for human consumption as defined in regulation 13 parts (a) and (d) of the Export of Fisheries Products (Sanitary) Regulations, 2010, provided that it can be demonstrated that the final product composition is safe for the intended use;
- (d) fresh by-products from fish from plants manufacturing fish products for human consumption;

- (e) whole fish or other sea animals, except sea mammals, caught in the open sea for the purposes of fishmeal production.

(3) Type 3: Fishery By-Products are those by-products that are not used either as ingredients or raw materials in food or feed. Examples of such products may include but are not limited to fish skins for the tannery industry.

(4) Type 4: Fishery Waste Products shall be one or more of the following namely, material derived from fishery product processing—

- (a) that has no commercial value and as such is removed from the food supply chain;
- (b) that is unsafe for human consumption due to contamination in excess of limits defined in Schedule 10 of the Export of Fisheries Products (Sanitary) Regulations 2010.;
- (c) that is suspected of being infected with diseases or parasites communicable to humans or animals;
- (d) that has been mixed with any potentially unsafe products, whether derived from products of fishery, animal origin or non animal origin;
- (e) that has been handled, processed or stored in any way that may make it unsafe for human or animal consumption.

5.(1) All raw materials shall—

- (a) originate from establishments, including vessels, registered and approved by the Competent Authority according to the Export of Fisheries Products Regulations 2010.;

Fishery By-
Product
Requirements
Type 1

- (b) meet the requirements for food safety conditions as set out in Schedule 10 of the Export of Fisheries Products Regulations 2010;
- (c) be derived from fishery products which are fit for human consumption as defined by the appropriate organoleptic and/or chemical standards for freshness.

(2) They shall be transported and stored with respect to conditions of hygiene as set out in Schedule 6 of the Export of Fisheries Products Regulations 2010.

(3) All processing shall be in accordance with the requirements for all other fishery product as set out in the Export of Fisheries Products Regulations 2010 and its Schedules.

(4) Specific products may also need to comply with additional measures as set out the Schedules to these Regulations.

Requirements
for Type 2:
Fishery-By-
Products

6.(1) All raw materials shall—

- (a) originate from establishments, including vessels registered and approved according to the Export of Fisheries Products (Sanitary) Regulations 2010;
- (b) such premises shall be used for the sole purpose of processing Type 2 Fishery by-products.

(2) Traceability and recall procedures shall be implemented for all raw materials and final products as set out in Schedule 14 of the Export of Fisheries Products (Sanitary) Regulations 2010.

(3) The processing facility must meet the requirements set out in—

- (a) Schedules 7 (General plant hygiene);
- (b) Schedule 12 (HACCP requirements);

of the Export of Fisheries Products (Sanitary) Regulations 2010.

(4) The processing facility must be separated from any other food processing operations (although it may be linked by either a conveyor system or doorways for reception of raw material).

(5) The processing plant must have clearly defined and separated areas for handling of raw materials, processing and final product handling and storage, to prevent cross contamination between raw material and final product. The “unclean” raw material areas must include a covered reception area to receive fishery by-products and must be constructed in such a way that it is easy to clean and disinfect.

(6) The unclean sector shall include, where appropriate—

- (a) areas for reception and storage of raw materials;
- (b) equipment to reduce the size of animal by-products;
- (c) equipment for loading the crushed animal by-products into the processing unit.

(7) Where heat treatment is required, all installations must be equipped with—

- (a) measuring equipment to monitor temperature against time and, if necessary, pressure at critical points;

- (b) recording devices to record continuously the results of these measurements; and
- (c) an adequate safety system to prevent insufficient heating.

(8) The processing plant must have its own laboratory or make use of the services of an external laboratory. The laboratory must be equipped to carry out necessary analyses and be approved by the Competent Authority.

General hygiene requirements

(9) Fishery by-products must be processed as soon as possible after arrival. They must be stored under appropriate conditions until processed.

(10) Containers, receptacles and vehicles used for transporting unprocessed material must be cleaned in a designated area. That area must be situated or designed to prevent the risk of contamination of processed products.

(11) There must be clear physical separation of personnel and equipment between those areas in which raw materials (“unclean”) and post heat treatment product (“clean”) areas are handled to prevent cross contamination of final product. Documented procedures must be established to control the movement of personnel and equipment between areas with appropriate controls prescribed (e.g. foot baths, cleaning & disinfection of equipment).

(12) Installations and equipment must be kept in a good state of repair and measuring equipment must be calibrated at regular intervals.

(13) Processed products must be handled and stored at the processing plant in such a way as to preclude recontamination.

Plants' own-checks

(14) Hygiene control must include regular own checks of the environment and equipment. Internal inspection schedules and results must be documented and maintained for at least two years.

(15) Operators and owners of processing plants shall put in place, implement and maintain permanent procedures for the application of HACCP system and own checks.

(16) Where the results of a tests on samples taken, do not comply with the provisions of these Regulations, the operator of the processing plant must —

- (a) notify the Competent Authority immediately of the full details of the nature of the sample and the batch from which it was derived;
- (b) establish the causes of failure of compliance;
- (c) reprocess or dispose of the contaminated batch under the supervision of the Competent Authority;
- (d) ensure that no material suspected or known to be contaminated is moved from the plant before being reprocessed under the supervision of the Competent Authority and re-sampled officially in order to comply with the standards laid down in these Regulations, unless destined for disposal;
- (e) increase the frequency of sampling and testing of production;
- (f) investigate animal by-products records appropriate to the finished sample; and

- (g) instigate appropriate decontamination and cleaning procedures within the plant;
- (h) specific products may also need to comply with additional measures as set out in the Schedules.

Requirements
for Type 3:
Fishery-By-
Products

7.(1) Products once dispatched from the fishery facility shall not re-enter the food or feed supply chain.

(2) The controls and requirements for further processing of such products are beyond the scope of this regulation.

Requirements
for Type 4:
Fishery
Waste

8.(1) The fishery waste shall be —

- (a) disposed of in accordance with the provisions of the Environment Protection Act 1994 and all regulations regarding the disposal of food or animal waste;
- (b) unless special facilities are provided for the continuous disposal of waste, 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 premises specifically set aside for that purpose. Care shall be taken to ensure that waste stored as provided for in this regulation does not constitute a source of contamination or pollution.

(2) The containers, receptacles and/or premises set aside for waste shall be —

- (a) always thoroughly cleaned and disinfected after use;

- (b) clearly labelled as Type 4 fishery waste and the containers shall not be used for any other fishery products or by-products.

(3) The waste shall be transported to disposal site in trucks and or containers specifically used for the sole purpose of waste disposal.

9.(1) The Competent Authority shall at regular intervals carry out inspections and supervision at plants approved in accordance with these Regulations. Inspections and supervision of processing plants shall take place in accordance with Export of Fishery Products (Sanitary) Regulations, 2010.

Official
controls and
lists of
approved
plants

(2) The frequency of inspections and supervision shall depend on the size of the plant, the type of products manufactured, risk assessment and guarantees offered in accordance with the principles of the system of hazard analysis and critical control points (HACCP).

(3) If the inspection carried out by the competent authority reveals that one or more of the requirements of these Regulation are not being met, the Competent Authority shall take appropriate action as described under the Export of Fishery Products Act (Cap 77A).

(4) The Competent Authority shall draw up a list of plants approved in accordance with the Regulations and shall assign an official number to each plant, which identifies the plant with respect to the nature of its activities.

SCHEDULE 1

Specific Requirements for Production of Fish Oil

1. Fish oil shall be classified as either crude or refined product, where—

Product

- (a) crude fish oil shall be used only as —

- (i) a product that will undergo further refining or processing before being incorporated in a food product;
 - (ii) an ingredient in feed manufacture,
- but the requirements for production of all crude fish oils irrespective of its use shall remain the same;
- (b) refined fish oils shall have undergone further processing and laboratory analysis to demonstrate its safety. It can be used as an ingredient or component in food products;
 - (c) all fishery products used for production of fish oil shall be fit for human consumption as determined by organoleptic or TVB-N determination;
 - (d) the processor is responsible for conducting “own checks” on raw materials, including the determination of TVB-N, and documenting such checks as part of the HACCP plan;
 - (e) the maximal permitted levels for TVB-N in raw materials for production of fish oil are —
 - (i) 25 mg of nitrogen/100 g of flesh for species *Sebastes* spp., *Helicolenus dactylopterus*, *Sebastichthys capensis*;
 - (ii) 30 mg of nitrogen/100 g of flesh species belonging to the *Pleuronectidae* family;
 - (iii) 35 mg of nitrogen/100 g of flesh for *Salmo salar*, species belonging to the *Merlucciidae* family, species belonging to the *Gadidae* family;

- (iv) 60 mg of nitrogen/100 g of flesh for whole fish of species that are caught for the sole and direct purpose of fish oil production;
- (f) all fish to be used for the production of fish oil shall, be stored, transported and handled in conditions that are the same as for any fishery product according to the Export of Fishery Products (Sanitary) Regulations 2010, except that where whole fish of species that are caught for the sole and direct purpose of fish oil production are used they may be processed without chilling provided that the organoleptic criteria and TVB-N criteria are met and processing occurs within 36 hours of capture.

2. These levels are maximal levels designated beyond which the product is declared unsafe for use as a crude product. Analysis shall only be required for the purposes of verifying product safety where contamination is thought to have occurred.

Maximum levels
of Contaminants
in Crude Fish
Oil

Arsenic		
Aldrin		
Dieldrin	0.1 mg/kg	
Campechlor		
Dioxins	6.0 pg/g	WHO-PCDD/ F-TEQ/kg (1)
Sum of dioxins and dioxinlike PCBs	24.0 pg/g	WHO-PCDD/ F-PCB-TEQ/kg (1)

(1) WHO-TEFs for human risk assessment based on the conclusions of the World Health Organisation meeting in Stockholm, Sweden, 15-18 June 1997 (Van den Berg et al., (1998) Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, and PCDFs for Humans and for Wildlife. Environmental Health Perspectives, 106(12), 775).

SCHEDULE 2**Specific Requirements for Fish Meal Production**

Processing

1. Processing plants must have an installation to check the presence of extraneous matter, such as packaging material, metallic pieces, etc. in the animal by-products.

The fishery by-products must undergo an appropriate heat treatment process dependant on the particle size the raw materials have been reduced to. The processing parameters (flow rate time and temperature etc) of this heat treatment must be proven by laboratory analysis, to ensure the final product meets the microbial standards in part 2 of this schedule.

The critical control points must at least include—

- (a) raw material particle size;
- (b) temperature achieved in the heat treatment process;
- (c) pressure applied to the raw material, if applicable; and
- (d) duration of the heat treatment process or feed rate to a continuous system.

Minimum process standards must be specified for each applicable critical control point.

When using a continuous flow system, the progression of the product through the heat converter must be controlled by means of mechanical commands limiting its displacement in

such a way that at the end of the heat treatment operation the product has undergone a cycle which is sufficient in both time and temperature as verified by microbial analysis of final product.

Records must be maintained for at least two years to show that the minimum process values for each critical control point are applied.

Accurately calibrated gauges/recorders must be used to monitor continuously the processing conditions. Records must be kept for at least two years to show the date of calibration of gauges/recorders.

Material that may not have received the specified heat treatment (for example, material discharged at start up, or leakage from cookers) must be re-circulated through the heat treatment or collected and reprocessed.

2. Microbial analysis for Salmonella is required to verify the effectiveness of the heat treatment,

Microbial
limits in final
product

		n	c	m	M
Salmonella	absence in 25 g	5	0	0	0
Enterobacteriaceae		5	2	10	300 in 1 g

Where:

- n = number of samples to be tested;
- m = threshold value for the number of bacteria; the result is considered satisfactory if the number of bacteria in all samples does not exceed m;
- M = maximum value for the number of bacteria; the result is considered unsatisfactory if the number of bacteria in one or more samples is M or more; and

c = number of samples the bacterial count of which may be between m and M, the sample still being considered acceptable if the bacterial count of the other samples is m or less.

Maximal levels of contaminants in fishmeal

3. These levels are maximal levels designated beyond which the product is declared unsafe for use as feed. Analysis shall only be required for the purposes of verifying product safety where contamination is thought to have occurred.

Nitrites	60 mg/kg	(expressed as) sodium nitrite)
Aldrin	0.1 mg/kg	
Dieldrin		
Campechlor		
Dioxins	6.0 pg/g	WHO-PCDD/ F-TEQ/kg (1)
Sum of dioxins and dioxin-like PCBs	24.0 pg/g	WHO-PCDD/ F -PCB-TEQ/kg (1)

(1) WHO-TEFs for human risk assessment based on the conclusions of the World Health Organisation meeting in Stockholm, Sweden, 15-18 June 1997 (Van den Berg et al., (1998) Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, and PCDFs for Humans and for Wildlife. Environmental Health Perspectives, 106(12), 775).

MADE this 15th day of November, 2010.

PETER SINON
MINISTER OF INVESTMENT,
NATURAL RESOURCES AND INDUSTRY
