

# INVENTORY OF FISH PRODUCTS IN SOUTHEAST ASIA

## Third Edition, 1996

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### Introduction

In 1984, the MFRD was requested to compile an inventory of fish products in Southeast Asia. The objective of the survey was to list the fish products available in countries in the region and the technical problems and constraints in meeting market requirements. That inventory, published in 1987, was the first of a series of compilations which is a comprehensive record of fish products in the region, and will be of interest to researchers, food scientists, fish technologists and administrators. It was also useful for fish traders, and may be used as a reference for further improvement of the quality of these products in the region.

In 1989, a similar survey resulting in the second inventory was undertaken. The challenge to conduct the second survey was raised at the 20th SEAFDEC Anniversary Seminar on Development of Fish Products in Southeast Asia in October, 1987, in Singapore.

Participants at the above seminar welcomed the publication and recommended periodic updating of information of the inventory. At that meeting, a workshop was held to deliberate on the second publication and suggestions for improvements were proposed for inclusion in the third edition.

This third edition was published in 1996 to coincide with the SEAFDEC Seminar on Advances In Fish Processing Technology In Relation to Quality Management In Southeast Asia, held on 28 October - 2 November 1996, in Singapore. At the same time, a workshop on the Compilation Of Fish Products In Southeast Asia was held to share the experiences of coordinators in the compilation of this inventory. This third inventory included the participation of a new member country, Vietnam for the first time. It also introduces readers to the various types of fish products consumed in the country.

### Objectives Of Survey

The objectives of this survey are to :

1. update information on existing fish products,

2. to document new fish products,
3. to identify their quality level, and
4. to identify the constraints in their marketing and promotion.

The seven ASEAN countries that participated in this survey are :

1. Brunei Darussalam
2. Indonesia
3. Malaysia
4. Philippines
5. Singapore
6. Thailand
7. Vietnam

The ASEAN countries consumed a wide range of fish products. Based on critical responses received to the first edition of this inventory, the products were classified into the following categories (alphabetical) :

- a. Boiled
- b. Canned
- c. Comminuted
- d. Cured
- e. Dried
- f. Fermented
- g. Fish Meal
- h. Frozen
- i. Powdered/Flaked
- j. Smoked
- k. Others

The questionnaire for this third inventory was sent in early 1995 to invite the participants to conduct the survey. Efforts were made to incorporate suggestions from users of the previous inventories; attempts were made to make the survey as comprehensive as possible, and to include all background information on fish products.

### Achievements of the Three Inventories

The wide variety of fish products consumed in the Southeast Asian region are identified in the three inventories. The first inventory helped to identify the important fish products widely consumed in the region. This included traditional products such as those which are dried, fermented and smoked. It was stressed at that time some of the fish products have

the potential to be upgraded to value-added products if more attention is paid to the final quality and improved packaging.

The second inventory saw new products emerging in the market which were not listed in the first inventory. These included fish products from canned, frozen and comminuted products such as sausage, burger, dumplings, fishcakes with various flavours and imitation crabmeat. The second publication also listed the problems faced in the production of fish products. The main problems are the short shelf-life and poor packaging of the final products and the poor hygiene and sanitation of processing areas.

One of the challenges in the second inventory was how to overcome difficulties in collecting data, as data on emerging products (e.g. surimi and surimi-based products) are not easily available. To ease this problem,

SEAFDEC's Fishery Statistical Bulletin of the South China Sea Area (at the 6th Regional Workshop on Fishery Statistics in Southeast Asia, Bangkok, 1-4 Jul 86) adopted the same classification of fish products as used in the inventory. Therefore, the work of fish technologists and fish processors will be made easier in due course.

#### **Achievements of the Third Inventory**

One of the differences between the current (third inventory) and the previous inventories is the inclusion of the Vietnamese fish products. This results in a greater variety of fish products as compared to the previous editions. The survey indicated, however, that people in the ASEAN region consumed similar and a wide categories of products, as shown in Table 1. One of the problems indicated in this inventory is the lack of quality control during processing and the need to improve on packaging, which is also an indication of improved quality. The third inventory also provides readers with many photographs of fish products and their processing in order to give them a more complete understanding of the fishery products in this region.

Problems in the production and marketing of fish products recorded in previous inventories are again listed by the participating countries in the 1996 survey. This shows, unfortunately that improvements have not been made fast enough. The problems listed include short storage life and packaging of products, poor hygiene and sanitation of processing areas. In the case of the traditional products - dried, fermented and smoked products - the problems listed also included processing, poor handling of raw materials and processing methods resulting in inconsistent quality of the final products.

#### **Problems Faced in Compiling the Third Inventory**

##### **1. Change of country coordinators.**

Some of the country coordinators have been replaced; much time is spent by the compilers in explaining and familiarising them to carry out this collaborative work.

##### **2. Loss of information through the post.**

Sometimes information was lost through the post and this caused concern and delay of work. This problem could be overcome with help of communication networking in the future.

##### **3. Dateline not met.**

Besides compiling and analysing information and data, one of the compiler's unrewarding jobs is to make sure that respondents adhere strictly to the dateline given to return the questionnaire. Deadlines overlooked by the respondents have resulted in a delay in the whole project.

#### **Concluding Remarks**

The first inventory was completed in 1987, followed by the second improved inventory in 1991. The third inventory was updated and published in 1996 as recommended by users of the second inventory. We hope that the inventory will be useful to all readers especially traders, processors, food researchers and scientists.

Table 1. Summary of fish products in the ASEAN Region.

Category	Brunei Darussalam	Indonesia	Malaysia	Philippines
Boiled	NA	Fish	Fish	NA
Canned	NA	Mackerel Tuna Sardine	Anchovy in sambal Fish in tomato sauce	Anchovy Mackerel in tomato sauce Milkfish Milkfish in tomato sauce Milkfish, Salmon style Sardine in tomato sauce Tuna in oil
Comminuted	Fishball Fishcake	Fishball	Cuttlefish ball, sausage Fish burger, fishcake, fishball Prawn dumpling, wantan <i>Otak-otak</i> Scallop flavour fish cake	Fish burger Fishball  Native sausage
Cured	NA	NA	NA	<i>Kench</i> style cured fish
Dried	Chilled-sour salted fish Dried shrimp Fish  Salted fish	Anchovy  Salted fish	Anchovy  Cockles Cuttlefish  Jelly fish Prawn Salted fish Shellfish	Abalone, anchovy  Barracuda, big-eye scad Crevalle, deep-bodied herring Fimbriated herring Hairtail, herring Indian sardines, lizard fish Long tailed nemipterid Mackerel, milkfish Roundscad, sea cucumber Shark fin, shrimp, slipmouth Squid, striped mackerel
Fermented	Cured shrimp Fish Fish stomach Mussel Shrimp paste	Fish Fish paste Fish sauce	Anchovy Pickled prawn Prawn paste Shrimp paste	Fish, fish sauce Milkfish, salted fish patis Shrimp paste
Fish meal	NA	Fish powder	Fish manure	Animal feed
Frozen	NA	Fish, shrimp, squid.	Cuttlefish  Fish Prawn	Cuttlefish and squid  Milkfish Shrimps and Prawns Tuna
Powdered	NA	NA	Prawn dust	NA
Smoked	Dried fish	Fish	Tuna	Herring Milkfish Roundscad Sardine
Others	Fish cracker Prawn cracker Squid cracker	Cracker	Prawn cracker Fish cracker Fish satay	Shrimp <i>kropeck</i> Seaweed

Category	Singapore	Thailand	Vietnam
Boiled	Cooked fish	Steamed fish	Steamed fish
Canned	NA	Babyclam Crab meat Fish in tomato sauce Shrimp Squid, cuttlefish, octopus Tuna	Mackerel in tomato sauce Tuna in oil
Comminuted	Breaded fish finger Breaded squid ring Cuttlefish balls, fingers, paste Fishballs, fishcakes, <i>chikuwa</i> Imitation crabsticks Prawn balls, fingers	Fish ball Fish finger Fish noodle Imitation crabmeat Minced fish Surimi	Fish sausage Fish burger (dehead ) Fish burger ( boneless ) Surimi
Cured	NA	Mantis shrimp Mussel	Jelly Salted moist fish
Dried	Sea cucumber Shark fin	Jelly fish Salted fish Salted freshwater fish Shellfish Shrimp Squid	Abalone, blue mussel clam Crimped squid, fish maw Jelly fish, oyster, peeled shrimp Salted fish (headed, split, whole) Scallop flesh, sea cucumber Sea horse, seasoned fish Shark fin, skinned cuttlefish Squid (whole), squid rings Urchin
Fermented	NA	Fish Fish sauce Shrimp paste	Acidified shrimp Fish sauce, fish meal Stiff shrimp paste
Fish meal	Animal feed	Animal feed	NA
Frozen	Cooked prawn Fish fillet Prawn Prawn meat Squids, cuttlefish Whole fish	Cooked shrimp Cuttlefish Fish Octopus Raw shrimp Shellfish Squid	Blue swimming crab block, cockle Comb-cuttlefish, cooked oyster Cooked shrimp IQF Cuttle fish block (edge, head, wing) Dipped shrimp, eel IQF Fancied swimming crab, cuttle fish Fillet cuttle fish, fish fillet Headed fish IQF, shrimp block Cuttlefish IQF, octopus block Peeled shrimp block, scallop block <i>Sai gon</i> rolled burger, seafood mix Shrimp <i>bisen</i> , skewered broiled shrimp Squid ring IQF, swimming crab roe Urchin blocks Whole cuttle fish block, IQF Whole fish degutted, IQF Whole shrimp block Whole skinned cuttle fish block
Powdered	NA	Fish powder, fish floss	Fish sauce concentrate
Smoked	NA	Dried fish	NA
Others	Prepared prawn cracker Prepared cuttlefish	Fish/shrimp cracker Fish satay	Agar, carrageenan, chitosan Fish cracker, fish liver oil, pearl Seaweed, shrimp cracker Sodium alginate