



GLOBEFISH

GLOBEFISH RESEARCH PROGRAMME



Markets for Tilapia

Volume 101

Markets for Tilapia

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(June 2010)

The GLOBEFISH Research Programme is an activity initiated by FAO's Products, Trade and Marketing Service, Fisheries and Aquaculture Policy and Economics Division, Rome, Italy and financed jointly by:

- NMFS (National Marine Fisheries Service), Washington, DC, **USA**
- FROM, Ministerio de Agricultura, Pesca y Alimentación, Madrid, **Spain**
- Ministry of Food, Agriculture and Fisheries, Copenhagen, **Denmark**
- European Commission, Directorate General for Fisheries, Brussels, **EU**
- Norwegian Seafood Export Council, Tromsø, **Norway**
- FranceAgriMer, Montreuil-sous-Bois Cedex, **France**
- ASMI (Alaska Seafood Marketing Institute), **USA**
- DFO (Department of Fisheries and Oceans), **Canada**
- SSA (Seafood Services Australia), **Australia**

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MARKETS FOR TILAPIA
GLOBEFISH Research Programme, Vol. 101, Rome, FAO. 2010. p. 37.*

Tilapia is one of the fastest growing aquaculture species in the world. This is due to the low cost to produce this fish in all continents using a variety of production methods. Furthermore, tilapia is increasingly demanded in world wide markets ranging from the poorest segments in developing countries to highly developed western markets. Yet, the fast development in the tilapia industry has resulted in a relatively small number of studies compared to other aquaculture industries like salmon or shrimp. This report reviews the development of tilapia aquaculture production and markets and provides a brief discussion on its likely developments in the future.

Acknowledgement: We are grateful to Helga Josupeit for helpful comments.

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1. INTRODUCTION

The purpose of this report is to analyse markets for tilapia worldwide. The production of tilapia has expanded tremendously in the past decades, in particular, due to the development of aquaculture in a number of countries. Tilapia is now one of the most important aquaculture species with respect to production. The industry has grown from a production of 107 000 tonnes in 1980 to over 2.5 million tonnes in 2007. It is farmed in all continents and in more than 80 countries using a wide variety of production methods ranging from artisanal to intensive operations at a relatively low cost. Moreover, tilapia is increasingly demanded in a wide market base reaching from highly developed western markets to the poorest communities in developing countries. This has resulted in exports rising faster than production; yet limited research has been undertaken on these markets.

This report is organized as follows: First, the increasing role of aquaculture in meeting the growing demand for fish products will be examined, including the relative contribution of tilapia in meeting this demand. Next, trends in global tilapia production will be discussed. Following this, production systems will be briefly explained. From this, it will be evident that some regions have a comparative advantage in aquaculture production as the production costs are related to the climatic conditions of the region. Finally, the development and relationship of world tilapia markets will be discussed.

2. THE ROLE OF AQUACULTURE IN TILAPIA PRODUCTION

The rising contribution of aquaculture to world fisheries production in contrast to the stabilisation or decline of landings from most wild fish stocks highlights the increasingly important role of aquaculture in satisfying seafood consumption. Wild fisheries and aquaculture production¹ increased from 63 million tonnes and 3 million tonnes in 1970 to 84 million tonnes and 9 million tonnes in 1986 and then, 90 million tonnes and 50 million tonnes in 2007, respectively. These figures indicate that the contribution of aquaculture to total world fisheries production increased from 4 percent in 1970 to 10 percent in 1986 and to 36 percent in 2007. In the near future, aquaculture production for food consumption will exceed landings of wild fish.

The continuous increase in aquaculture production has satisfied the growing demand for seafood products. Global per capita consumption of seafood has increased from 11.6 kg/capita in 1973 to 12.8 kg/capita in 1985 to 16.4 kg/capita in 2007. A number of factors account for the overall growth in demand including population growth, higher incomes, rapid urbanisation, rising international trade, increasing number of agreements on trade, rules, tariffs and quality standards, improvement in production, processing, packaging, refrigeration, marketing and transportation, lower seafood prices, and social factors mainly in developed countries (e.g. increased participation of females in the workforce, fragmentation of meals in households, decrease in family size and increase in the number of single-person households).

In developing countries seafood demand has mainly increased due to the rise in population, income and rapid urbanisation. Consumer theory suggests that as individuals become wealthier, they substitute higher-valued products for lower-valued ones, once the basic food needs are met. This explains how the increase in income has shifted demand towards diets

¹ Note: Excluding aquatic plants.

containing more proteins and vegetables with a reduction of the share of basic cereals. Furthermore, the increase in urbanisation has resulted in a rapid expansion of supermarkets in Asia and South and Central America. These outlets offer consumers a wider choice of seafood species and products throughout the year and at lower prices.

In developed nations, consumers look for more variety in their diets. In addition, changing consumer lifestyles where less time is spent cooking and eating, has increased demand for food that although a bit more expensive, is convenient, healthy, nutritious, tasty and easier to prepare.

Aquaculture is expected to continue to be the main growth force behind world fisheries production for the foreseeable future despite the challenges facing its development. The top 10 species groups in terms of production quantity and percentage increase in production quantity from 2004 to 2007 are presented in Table 1. Carp production exceeds production of all the other species (14.9 million tonnes in 2007). This is followed by oysters (second), clams, cockles and arkshells (third) and tilapia (fourth). Interestingly, the largest growth from 2004 to 2007 came from the production of catfish, shrimps and tilapia species which grew by 82 percent, 71 percent and 41 percent, respectively.

Table 1. Top ten species groups in terms of aquaculture production, in tonnes

Species group	2004	2007	% Growth
Carp	13 501 837	14 892 443	10%
Oysters	4 141 412	4 401 030	6%
Clams cockles and arkshells	3 634 661	4 213 342	16%
Tilapia	1 778 935	2 505 465	41%
Shrimps	1 442 821	2 470 181	71%
Catfish	1 217 265	2 212 626	82%
Mussels	1 662 120	1 630 795	-2%
Salmon	1 373 786	1 560 626	14%
Scallops and pectens	1 048 262	1 463 235	40%
Prawns	914 480	805 405	-12%

Source: FAOa, 2009

The fast growth of shrimp, catfish and tilapia is due to the expansion in production in developing countries, the increase in international trade and the development of new markets. For these species, international trade and expansion of tilapia into new markets are relatively new phenomena. This explains the limited number of studies investigating the markets of tilapia and its future development despite tilapia being described as the perfect farm fish².

Global Tilapia Production

Next, we provide background information on the production of tilapia on a global scale. First, the total quantities of farmed and wild tilapia produced worldwide over time are illustrated. Then, the different tilapia species used in farming are indicated. Finally, the characteristics of

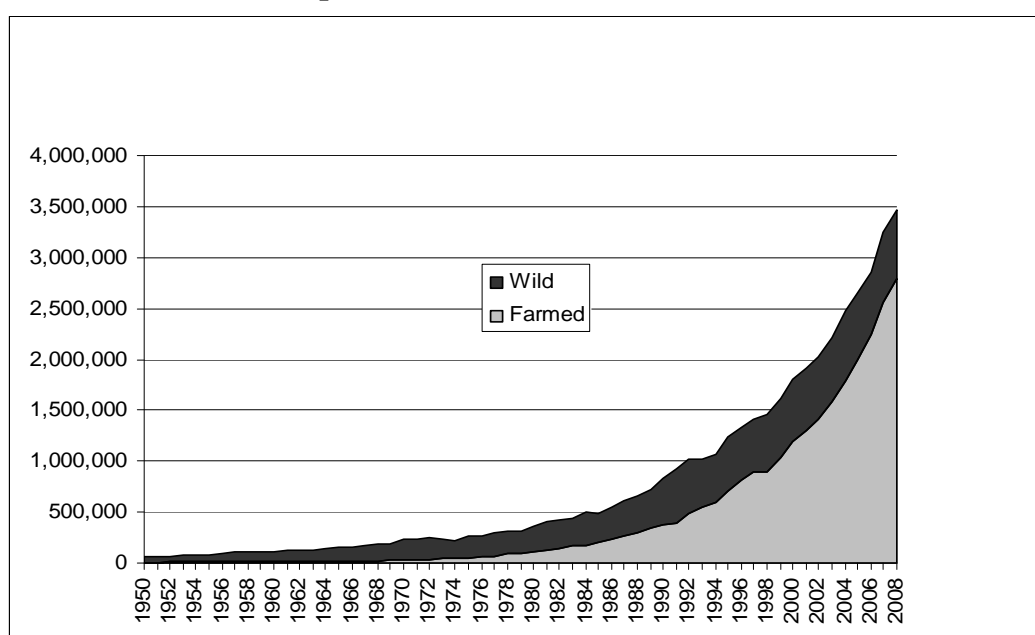
² Tilapia has been recognised as the perfect farmed fish because it is easy to raise, disease resistant, and readily accepted by consumers from the most marginal consumer markets within developing countries to premium markets in developed countries (Anderson, 2007; Young and Muir, 2002).

tilapia that have contributed to the success of farming this fish together with the arguments against producing tilapia are explained.

Tilapia's basic biology, feeding and veterinary requirements allow farmers to produce this fish at a relatively low cost. This has led to a rapid increase in production and has made farmed tilapia the most important component of the tilapia industry.

World farmed and wild tilapia production from 1980 to 2007 is illustrated in Graph 1. World wild tilapia production has increased from 250 354 tonnes in 1980 to 670 049 tonnes in 2007, while world farmed tilapia production has increased from 107 459 tonnes to 2 505,465 tonnes during the same period. This means world farmed tilapia production has increased from 30 percent of total production in 1980 to 79 percent in 2007.

Graph 1. Annual quantities of farmed and wild tilapia produced worldwide, in tonnes



Source: FAO 2009a, b

There are approximately 70 tilapia species of which only 10 are farmed worldwide. FAO reports the following farmed tilapia species within its statistics; Nile tilapia (*Oreochromis niloticus*), Mozambique tilapia (*O. mossambica*), Blue tilapia (*O. aureus*), Mango tilapia (*Sarotherodon galilaeus galilaeus*), Blackchin tilapia (*S. melanotheron*), Longfin tilapia (*O. macrochir macrochir*), Redbelly tilapia (*Tilapia zilli*), Redbreast tilapia (*Tilapia rendalli*), Sabaki tilapia (*O. spirulus spirulus*) and Three spotted tilapia (*O. andersonii*).

All tilapia species have very similar characteristics although slight variations such as differences in salinity tolerances affect what species are chosen by producers. Of all the species, Nile tilapia is the most commonly farmed due to its suitability for farming in a wide array of culture systems and environments, ranging from extensive low input pond culture to intensive recirculating systems. By the year 2007, 85 percent of world farmed tilapia production was Nile tilapia.

There are numerous characteristics of tilapia that have encouraged farmers to culture this fish throughout the world. Tilapia can successfully adapt to many different environmental

conditions because it tolerates high salinity levels despite being a freshwater fish, high water temperature, low dissolved oxygen as well as high ammonia and nitrite concentrations. In addition, tilapia has a strong resistance to viral, bacterial and parasitic diseases making it very easy to nurse. Also, in contrast to salmon, tilapia's omnivorous diet makes it cheap and easy to feed. Furthermore, tilapia reproduces and grows fast. Tilapia can grow from fingerling to market size in three months. However, this fast reproduction can also be a constraint because tilapia reaches sexual maturity before it reaches its marketable size. Females then start spawning asynchronously and very frequently, which can lead to overpopulation and stunting.

Another constraint in temperate regions is that tilapia does not tolerate low water temperatures. Tilapia's reproduction and growth is best at water temperatures higher than 26.7 °C. As a result, producers in these areas have to invest in expensive production systems to maintain an adequate water temperature.

The next section explains the different production systems used. This is important as different production systems involve different production costs and qualities that in turn affect the competitiveness of producers in local and international markets.

3. PRODUCTION SYSTEMS

Tilapia is farmed within an array of different culture systems (earthen pond, cage, concrete tank, and raceway) and it is produced using a great number of different management strategies (extensive, semi-intensive, intensive, monosex culture, mixed sex culture, monoculture, polyculture, and integrated with agriculture or animal husbandry). Farmers decide what culture system and management strategy to use depending on their resources for building up infrastructure, the site characteristics, environmental conditions (in particular climate), socio-economic factors, technical knowledge, and marketing feasibilities.

The earthen pond is the most versatile culture system for extensive, semi-intensive, and intensive tilapia production. It is mainly used in tropical countries in Asia, South and Central America and Africa. This is because it is only economically viable in areas with a warm year round climate, suitable land and relatively large quantities of water available.

A picture of this system is presented in Figures 1 and 2. The main inconvenience of this system is the risk of uncontrolled reproduction that can rapidly lead to overcrowding and stunting of the tilapia. Two management strategies can avoid excessive reproduction: a) polyculture with a predator fish and b) monosex culture³. All-male culture is generally preferred because it allows longer culture periods, higher stocking rates and fingerlings of any age. Furthermore, males grow about twice as fast as females because females use considerable energy in egg production and do not eat when they are incubating eggs.

Cage culture is used in countries where lakes, large reservoirs, rivers and/or estuaries are available and is illustrated in Figures 1 and 2. This system is most often found in South East Asia and South and Central America where they use semi-intensive and intensive farming practices. Cage culture is less used in Africa because this system requires higher quantities of water than earthen ponds and producers in this latter continent generally face water

³ Monosex populations can be achieved through manual sexing, direct hormonal sex reversal, hybridisation or genetic manipulation to produce "super-males".

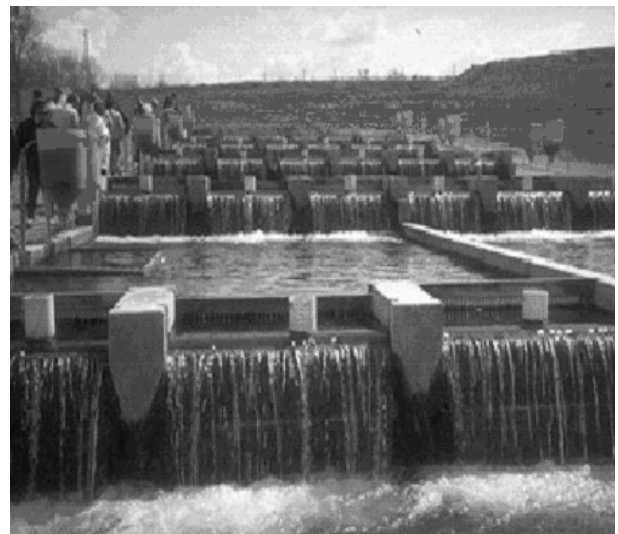
constraints. This system also has the negative characteristic that it can cause a range of environmental problems associated with high stocking densities and low water circulation. Nevertheless, cage culture allows rearing mixed sex populations without the problem of overcrowding and stunting that can face earthen ponds. This is because eggs will fall through the mesh to the pond bottom before the female can collect them for brooding.

Figures 1 and 2. Tilapia production in earthen ponds and in cages



Sources: A. Norman-López and AquaSol, Inc (2003)

Figures 3 and 4. Tilapia production using tanks and raceways



Sources: A. Norman-López and Arsenault et al (2002)

Tanks and raceways are used with an intensive management strategy. Pictures of these systems are presented in Figures 3 and 4. These systems are particularly used in temperate countries although producers in tropical countries may also use these systems.

Tanks and raceways are a preferable alternative to pond or cage culture if sufficient water or land is not available and as long as the farmer is able to invest a large enough sum of money on infrastructure and maintenance. Furthermore, farmers will have to provide a complete commercial diet for the fish and be aware of the increased risk of the outbreak of disease. One advantage is that they are able to maintain an adequate water temperature through water circulation. This makes it possible to produce tilapia in areas where it would not grow

naturally, such as temperate regions. Also, it is easier to manage the stocks and to exert a closer control over water quality parameters. This is an important consideration if the producer wishes to export tilapia.

The wide variety of culture and management systems makes it feasible for tilapia to be produced for subsistence at one extreme and in large-scale commercial operations at the other extreme and at any point in between. In general, tilapia cage culture requires the lowest capital investment and tanks and raceways the highest. Young and Muir have indicated the following capital costs for the different farming systems⁴: Cages USD 500–1 000 per tonne, earthenponds USD 800–2 000 per tonne, tanks and raceways USD 2 000–USD 8 000 per tonne and recycle systems USD 5 000–USD 15 000 per tonne.

The operating costs for running tilapia farms also vary considerably and depend on the system used and where tilapia is produced. Inexpensive production systems are generally used in warm climates. In these systems, feed and fertiliser are the greatest expense ranging between 40–75 percent of total operating costs. This is followed by seed (5–25 percent) and labour (5–15 percent).

Family owned small-scale artisanal systems can even have negligible operating costs if they self-supply fry and use low quality feeds and fertilizer. On the other hand, temperate countries face high operating costs because they use intensive re-circulating systems. In these systems, feed only represents 21–34 percent of costs due to the high costs of other inputs, such as oxygen, electricity, highly trained labour, interest and depreciation.

4. REGIONAL COMPARATIVE ADVANTAGES IN TILAPIA PRODUCTION

In general, total tilapia production costs will be higher in temperate than in tropical regions. Nonetheless, even within tropical areas, tilapia production costs will vary substantially between producers. In South and Central America costs range between USD 0.5 and USD 1.2/kg live weight. In Egypt and Kenya costs are approximately USD 1.0/kg live weights⁵, while in Asia they can be as low as USD 0.3/kg live weight⁶. Overall, Asian tilapia producers face lower production costs than other continents because they require a lower technological investment. In spite of this, tilapia farming costs are likely to decline over time especially at the high technological end, due to the advance of technology, improved feeds, economies of scale, greater management efficiency, and the use of better husbandry

⁴ Young and Muir (2002) include as capital costs: holding facilities, water supplies, feeding and harvesting, transport and handling facilities, feed production and fish processing equipment, buildings, services, and infrastructure.

⁵ Average total cost calculated from 14 farms using earthen ponds in Egypt with data obtained from El-Naggar, Nasr-Alla and Kareem (2006). For Kenya, data obtained from Engle et al., 2005. Exchange rate 1 Kenyan shilling = USD 0.0132.

⁶ Dey *et al.*, (2000) have indicated Chinese, Bangladesh, Thai and Vietnamese earthen ponds under tilapia polyculture systems produced 6,593 kg/ha, 1,736 kg/ha, 6,290 kg/ha and 3,020 kg/ha, respectively, in 1995-96. The costs of production for these countries were, respectively, 4,660 USD/ha, 422 USD/ha, 3,163 USD/ha and 906 USD/ha. Therefore, production costs were 0.7 USD/kg in China, 0.3 USD/kg in Bangladesh and Vietnam and 0.5 USD/kg in Thailand. Young and Muir (2002) also indicate production costs are low in Asia at only 0.5 USD/kg. In Bean and Xinping (2006), Chinese tilapia products costs are 0.7 USD/kg.

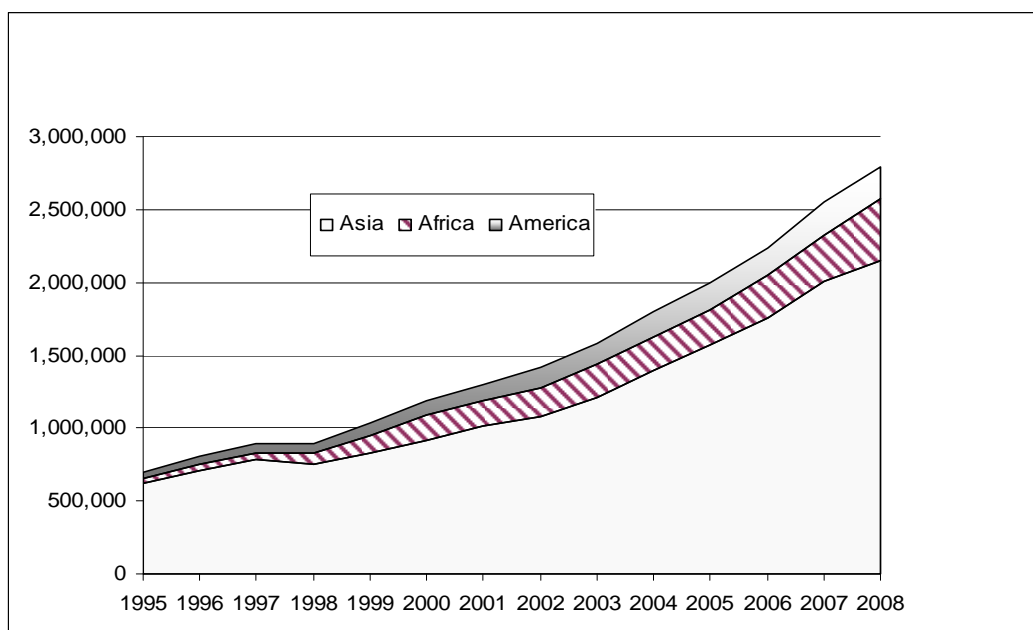
techniques⁷. This reduction in farming costs has already been experienced by other farmed fish including salmon and catfish in the 1980s and 1990s.

The variation in total production costs between producers leads to different levels of productivity. As a result, the largest producers of farmed tilapia are located in South East Asia, followed by Africa and then South and Central America. In Graph 2 the production of farmed tilapia in Africa, America and Asia from 1995 to 2007 is presented⁸. Europe is not included because production was negligible at 320 tonnes in 1995, growing to only 1 097 tonnes in 2007.

The largest producers are located in Asia followed by Africa and America. Tilapia production has increased in the three continents, although the growth in America primarily represents that of South and Central America. This region has produced more than 90 percent of the total farmed tilapia production in America since 1999. The rest of production relates to North America which includes Bahamas and the USA. Asian tilapia production represents approximately 80 percent of world farmed tilapia production. Asian tilapia production has increased from 616 893 tonnes in 1995 to 1 963 714 tonnes in 2007.

To sum up, and despite differences in the methods of production, the wide distribution of tilapia throughout the world indicates the adaptability of this fish to a wide range of environmental conditions.

Graph 2. Annual quantities of farmed tilapia produced in Asia, Africa and America, in tonnes



Source: FAOa, 2009

⁷ Husbandry techniques such as all male tilapia (monosex culture), hybridization, and grow out systems. These techniques reduce costs whilst increasing production of uniformly larger fish without the risk of stunted growth and overpopulation in ponds (Alceste and Jory, 2002; Urch, 2001).

⁸ Africa includes the Middle East. Asia includes several islands in Oceania. America includes North, South and Central America.

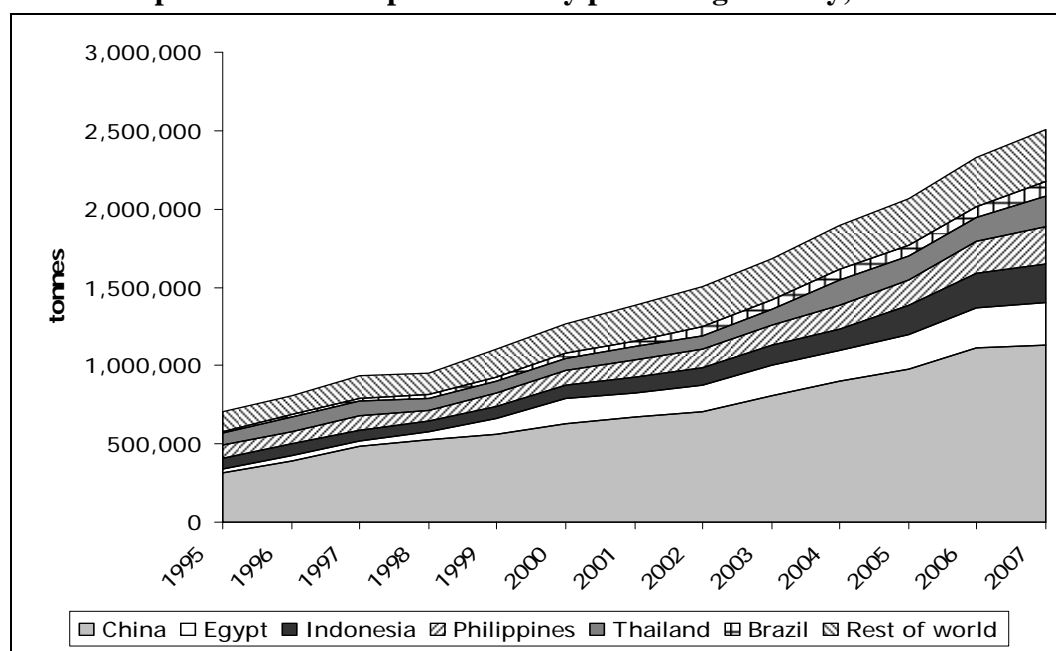
The geographical concentration of tilapia farming is even more evident if production from the largest farmed tilapia producers is compared to world farmed tilapia production. In Table 2 and Graph 3, the growth in production of the six largest producers of farmed tilapia worldwide from 1995–2007 are presented. China and Egypt are the largest producers of farmed tilapia followed by Indonesia, Philippines, Thailand, and Brazil. In 2007, the production of farmed tilapia by the six largest producers represented, respectively, 46 percent, 11 percent, 10 percent, 10 percent, 8 percent, and 4 percent of world farmed tilapia production. Egypt has also had the largest growth with an almost 13-fold increase in farmed production during these 12 years.

Table 2. Total farm production of the six largest producers of tilapia, in tonnes

Year	China	Egypt	Indonesia	Philippines	Thailand	Brazil	World Total
1995	315 053	21 969	74 125	81 954	76 383	12 014	702 885
1996	394 745	27 854	75 473	79 415	91 038	15 700	811 278
1997	453 239	30 416	73 222	91 834	91 580	16 845	897 985
1998	472 871	52 755	65 894	72 023	73 809	24 062	897 024
1999	495 442	103 988	74 005	83 832	76 621	27 104	1 037 065
2000	548 874	157 425	85 179	92 579	82 581	32 459	1 189 938
2001	583 043	152 515	105 106	106 746	84 510	35 830	1 302 288
2002	611 576	167 735	109 768	122 399	83 936	57 031	1 409 215
2003	696 890	199 557	123 748	129 996	98 376	64 857	1 577 283
2004	775 142	199 038	139 651	145 869	160 407	69 078	1 778 937
2005	844 728	217 019	189 570	163 004	203 911	67 851	1 980 450
2006	959 334	258 925	218 934	202 040	205 582	71 253	2 219 132
2007	1 134 080	265 862	248 305	241 183	190 258	95 091	2 505 467

Source: FAOa, 2009

Graph 3. Total farm production by producing country, in tonnes



Source: FAOa, 2009

5. WORLD TILAPIA MARKETS

Tilapia markets are highly diverse. Tilapia is simultaneously demanded by highly developed western markets, the poorest communities in developing countries and other markets in between. Traditionally, tilapia has been supplied to the poorest in Asia, Africa and South and Central America. Tilapia is native to Africa although tilapia farming was introduced for subsistence in Asia and South and Central America in the 1930s and 1940s. However, tilapia is increasingly demanded in urban markets. This is because production methods have improved quality (no off-flavours or muddy odour), supplied tilapia consistently throughout the year, and produced a variety of products at a reasonable price. This has led local supermarkets to favour tilapia over other freshwater species due to its competitive price and. Furthermore, demand for tilapia has grown fast in highly developed western markets in North America and Europe because tilapia meets the typical preferred requirements for fish; the meat is white, odourless, easy to fillet, and has a mild flavour. This has resulted in a fast expansion in international trade in recent years as tilapia production in these regions is small and producers in developing countries are able to supply this fish competitively to these markets.

Next, the main local and international tilapia markets supplied by the largest producer regions, namely, Africa, Asia and South and Central America are examined. This is followed by a discussion of markets in smaller producer regions, namely North America and Europe. North American markets are highly profitable to producers and have resulted in a fast expansion of the international trade in recent years. In Europe, markets are growing slowly. However, it is expected that demand will increase in the future as tilapia becomes better known to consumers.

Africa

The largest markets in Africa are situated in the main producing countries, namely, Egypt and Uganda. In 2007, Egypt and Uganda produced 265 862 tonnes and 16 891 tonnes of farmed tilapia, respectively, representing 83 percent and 5 percent of total farmed tilapia production in Africa.

In Egypt, local demand for tilapia and other seafood products has increased over the last few years due to the increase in population, the rise in household income and the devaluation of the Egyptian pound, which led to a decrease in fish imports and stimulated the local fish industry, in particular tilapia aquaculture. Unfortunately for tilapia producers, the increase in supply was higher than shifts in demand for tilapia. Hence, tilapia prices fell from USD 3.3/kg (11.0 LE/kg) in 1998 to USD 1.7/kg (7.7 LE/kg) in 2002. Since then, a better control of supply and growing demand has maintained prices at around USD 1.5/kg (8.4 LE/kg) till 2007.

Overall trade within Africa is not well documented. Internationally, some Egyptian producers export tilapia to Saudi Arabia and other Arab and African nations. Zimbabwe and Uganda export tilapia to the EU market. Zimbabwe exports fresh and frozen fillets of farmed tilapia into Europe through Luxembourg. On the other hand, Uganda exports wild caught tilapia. These two countries as well as other African countries are likely to expand their exports to the EU as European tilapia markets slowly expand. Moreover, Namibia and Mozambique could export tilapia to EU markets following the interest from the Spanish multinational, Pescanova, to invest in tilapia production in these countries.

Some African countries have recently exported tilapia to the USA market, although quantities are very limited (Table 3). Nevertheless, the fierce competition from Asian and South and Central American countries is likely to be impacting the consistency of exports from Africa to the USA.

Table 3. Exports from African producers to USA in whole-weight equivalents*, in tonnes

	Ghana	Cameroon	Kenya	Mauritius	Uganda	Total
2002	0	0	0	0	13	13
2003	0	0	0	21	0	21
2004	0	0	0	39	0	39
2005	61	0	0	0	0	61
2006	0	0	0	0	0	0
2007	0	66	5	0	0	70
2008	18	0	0	0	0	18
Jan-Nov 2009	0	22	0	0	0	22

* *Whole-weight equivalents were calculated as 1.1 times the weight of whole tilapia and 3.3 times the weight of fillets*

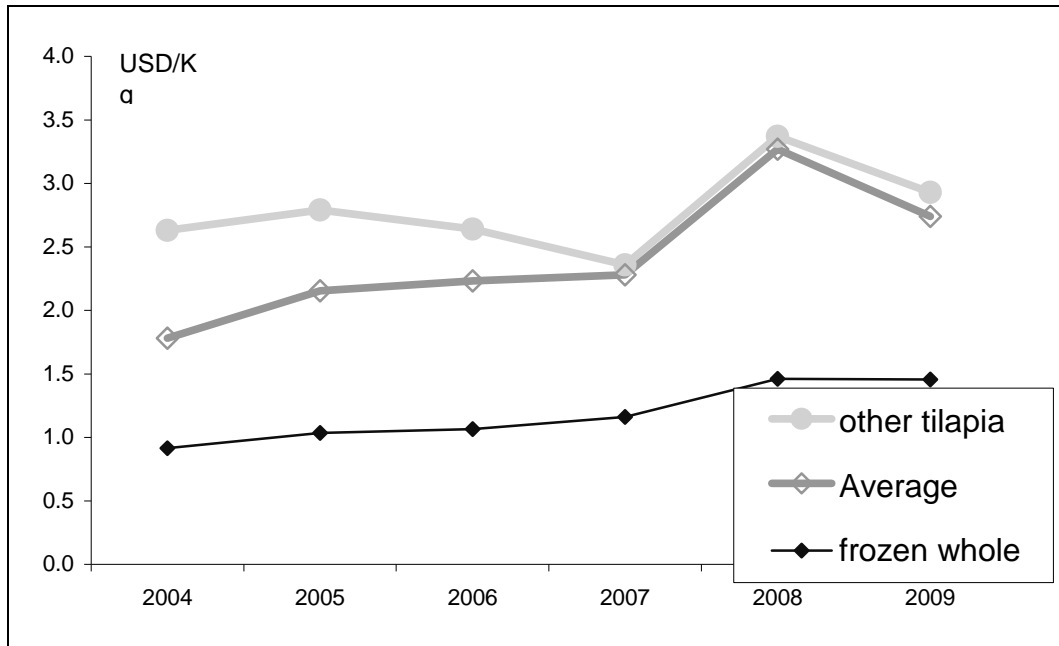
Source: NMFS, Foreign Trade dataset

Despite potential increases in African tilapia exports overseas, African markets are expected to continue being the main destination as local demand expands. In southern African markets (Angola, Botswana, Congo DR, Malawi, Mozambique, South Africa, Zambia and Zimbabwe), tilapia consumption has been predicted to expand from nearly 10 000 tonnes to over 40 000 tonnes in five to 10 years. Local markets will be the main destination because production and transport costs together with local prices are likely to continue providing a better return. Furthermore, producers will not require heavy investments in order to reach the quality standards demanded in EU and USA markets.

Asia

In Asia, the largest markets are situated in China, Philippines, Thailand and Indonesia due to their large populations. Other markets with smaller populations are Malaysia, Singapore, Hong Kong, and Taiwan Province of China. Demand has overall increased despite the reduction in domestic consumption following the global financial crisis in 2009. Demand has increased in Asian markets since the 1990s due to the increase in population, urbanisation, regular supply, comparatively cheap price and improved quality.

Graph 4. Unit value tilapia export: China



These factors have helped turn tilapia into a more popular product shifting consumer preference from expensive marine fish such as red snapper and highly valued culture species such as mullet towards tilapia which is considered to be tasty and cheaper. As a result, there has been an overall increase in consumption of locally produced tilapia as well as an increase in trade within the region. However, the increase in demand has not fully compensated for the large growth in supply. This has led to a fall in local prices. According to industry sources in China, in Beijing and Shanghai, the weighted average price dropped from USD 2.3/kg in August 2005 to USD 1.6/kg in January 2006. On the other hand, prices increased by 35 percent in the first nine months of 2008 due to a reduction in supply caused by an extremely cold winter early in the year. This increase in prices motivated a higher number of producers to sell tilapia locally rather than to international markets. By 2009, the global financial crisis caused a reduction in demand for tilapia locally and internationally leading to a fall in domestic prices.

Table 4. Exports tilapia from China by country of origin

	2004	2005	2006	2007	2008	2009
	(1000 tonnes)					
USA	62.9	80.9	104.7	122.0	118.6	134.4
Mexico	15.9	16.3	32.9	39.3	36.5	36.2
Russia	0.0	0.0	5.5	19.3	17.1	21.9
Israel	0.7	1.3	3.7	4.1	4.2	6.6
Germany	0.0	0.7	1.7	1.2	1.7	2.0
Hongkong	1.0	0.8	1.7	1.5	0.3	1.1
China						
Belgium	0.0	1.1	1.4	1.4	2.3	1.6
Puerto Rico	0.5	0.9	1.3	1.3	1.7	1.2
Dominica Rep.	0.1	0.5	1.0	1.4	0.5	1.0
Canada	1.1	1.1	1.0	0.7	0.6	2.4
Others	8.2	9.3	26.9	23.0	40.9	50.6
Total	90.4	112.9	181.8	215.2	224.4	259.0

Source: GLOBEFISH//INFOYU

Despite the decline in local tilapia prices, the domestic market is still stronger than the export market. Nevertheless, the export market is growing. In Table 5, Chinese tilapia exports to the three largest importers and other grouped destinations from 2002 to 2008 are presented. In 2008, the USA imported 58 percent of Chinese exports followed by Mexico and Russia with 18 percent and 8 percent, respectively. The “Other” category refers to unidentified countries in the statistics.

Table 5. Chinese exports to the five largest destinations in whole-weight equivalents*, in tonnes

	United States	Mexico	Russia	Middle East	Europe	America	Asia	Other	Total
2002	40 930	8 094		468	224	1 283	259	1 759	53 016
2003	77 513	15 870		822	0	1 301	2 820	3 102	101 428
2004	121 833	33 436	42	1 111	0	2 748	4 517	2 714	166 399
2005	172 636	30 834	48	2 683	3 928	4 958	1 437	2 643	219 167
2006	209 336	65 788	11 060	7 388	6 222	6 606	3 404	53 858	363 662
2007	268 400	86 460	42 460	9 020	5 200	6 800	3 000	9 060	430 400
2008	260 920	80 300	37 620	9 240	8 000	5 600	600	46 520	448 800
Jan-Sep 2009	201 520	55 660	41 800	10 780	5 200	6 200	1 600	30 240	353 000

* Whole-weight equivalents were calculated as 1.1 times the weight of whole tilapia and 3.3 times the weight of fillets

Source: www.infoyu.net

Table 6. Exports tilapia from China by product form

	2005	2006	2007	2008	2009
quantity	(1000 tonnes)				
<i>frozen whole</i>	40.5	46.9	14.0	12.7	33.1
<i>other tilapia</i>	71.2	133.9	201.2	211.7	226.0
Total	111.7	180.8	215.2	224.4	259.1
value	(million USD)				
<i>frozen whole</i>	41.9	50.0	16.3	20.0	48.2
<i>other tilapia</i>	198.8	353.5	474.6	713.6	662.0
Total	240.7	403.5	490.8	733.6	710.2
Unit value	USD/kg				
<i>frozen whole</i>	1.03	1.07	1.16	1.57	1.46
<i>other tilapia</i>	2.79	2.64	2.36	3.37	2.93
Total	2.15	2.23	2.28	3.27	2.74

Source: GLOBEFISH/INFOYU

South and Central America

In South and Central America overall consumption of tilapia has increased due to consumer recognition, higher quality, better marketing and a larger variety of product forms. Brazil, Colombia and Mexico are the three largest markets in the region due to their large populations and aquatic resources. Tilapia produced in these countries is mainly supplied locally because prices are higher than in other markets. In 2007, Brazil, Honduras and

Colombia produced 95 091 tonnes, 28 356 and 27 960 tonnes representing 45 percent, 13 percent and 13 percent, respectively, of total production in the region.

Brazil is one of the largest world markets and as such is capable of absorbing most of the production. Most production is sold in local markets because at current production and transport costs, the strong local currency and available prices provide a better return. Tilapia, in Brazil, is mainly sold live or whole fresh although processors are expanding the market by supplying fillets and other value added products at competitive prices. In Sao Paulo and Paraná states, the prices of live tilapia are between USD 0.73–1.07/kg, which is then sold in metropolitan areas at USD 1.17–1.50/kg, while fillets are sold at a retail price of USD 3–6/kg.

Whilst Brazil is able to supply most demand locally, tilapia imports are increasingly consumed in Mexican markets. This has resulted in Mexico becoming a large importer from China, the USA and a number of South and Central American countries including Brazil and Ecuador. Nevertheless, most of tilapia supplied to Mexican markets still comes from the wild.

Other countries in the region have also increased consumption although exports to the USA, the EU, and other South and Central American countries has surpassed local consumption over time. Unfortunately, overall trade within the region and into the EU is not well documented. In 2008, the largest exporter of tilapia to the USA was Ecuador followed by Honduras and Costa Rica. In Ecuador large privately owned companies dominate the export-oriented production by controlling the supply chain all the way from the feed mills through to distribution. Vertical integration allows these companies to control the quality of tilapia products and to reduce costs, making it profitable to export tilapia to international markets. Most exports are destined to the USA market. Other markets include Colombia, Mexico, Chile and Venezuela in South America, and the EU.

North America and Europe

Table 7. Imports into USA of tilapia (by product form) by country of origin

	2005	2006	2007	2008	2009
	(1000 tonnes)				
<i>Whole frozen</i>	56.5	60.8	46.9	49.6	44.2
<i>Frozen fillets</i>	55.6	74.4	100.6	100.6	114.8
<i>Fresh fillets</i>	22.7	23.1	26.2	29.2	24.4
Total	134.9	158.3	173.7	179.4	183.4

Source: GLOBEFISH

Over the last decade, the tilapia markets that have expanded fastest are located in North America and Europe. Demand was originally limited to immigrant communities of Asians, Africans and Latin Americans living in these regions. However, during the last decade, growth in demand has been fast as consumers have come to regard favourably the colour, texture, mild flavour and variety of products of tilapia. Tilapia consumed in North American and European markets is mainly imported from producers in South East Asia, South and Central America and Africa. The product forms imported into these markets are whole frozen tilapia, frozen and fresh tilapia fillets. The USA, followed by the EU, has become the world's largest importer of tilapia.

Table 8. Imports into USA of fresh tilapia fillets by country of origin

	2004	2005	2006	2007	2008	2009
	(1000 tonnes)					
Ecuador	10.2	10.6	10.9	11.9	8.5	9.1
Honduras	4.0	6.6	7.3	7.9	8.3	6.5
Costa Rica	4.1	3.7	2.7	4.8	5.6	5.7
Taiwan PC	0.1	0.0	0.0	0.0	0.6	0.2
Brazil	0.3	1.0	1.0	0.2	0.5	0.3
El Salvador	0.3	0.3	0.2	0.3	0.5	0.5
Panama	0.1	0.1	0.1	0.0	0.0	0.0
Others	0.4	0.5	0.9	1.1	2.1	2.1
Total	19.5	22.7	23.1	26.2	26.1	24.4

Source: *GLOBEFISH*

In the USA, tilapia has become the third most important seafood commodity imported after marine shrimp and Atlantic salmon. Imports increased from 11 245 tonnes in 1993 to 179 465 tonnes in 2008. China is the major exporter of frozen tilapia products. In 2008, China (Mainland and Taiwan Province) exported 91 percent of the total whole frozen tilapia imported into the USA (49 648 tonnes). For frozen fillets, China (Mainland and Taiwan Province) exported 90 percent of total imports of this product (103 735 tonnes) in 2008. Ecuador and Honduras followed by Costa Rica were the major exporters of fresh fillets in 2008. In this year, these countries exported 32 percent, 32 percent and 21 percent, respectively, from a total fresh fillet import into the USA of 26 082 tonnes.

Table 9. Imports into USA of whole frozen tilapia by country of origin

	2004	2005	2006	2007	2008	2009
	(1000 tonnes)					
China	31.8	30.9	40.5	32.5	29.0	29.7
Taiwan PC	24.9	24.1	18.3	13.5	15.9	13.2
Ecuador	0.1	0.1	0.1	0.2	0.2	0.0
Hong Kong	0.1	0.0	0.2	0.1	0.2	0.0
Thailand	0.1	0.2	0.6	0.2	3.3	0.9
Panama	0.1	0.5	0.4	0.1	0.3	0.1
Indonesia	*	0.2	0.3	0.0	0.2	0.0
Others	0.2	0.5	0.4	0.3	0.5	0.3
Total	57.3	56.5	60.8	46.9	49.6	44.2

Source: *GLOBEFISH*

The overall developments of imports into the USA as well as exports and re-exports from the USA are presented in whole-weight values in Tables 10 and 12. China is the largest exporter to the USA in whole-weight values. Ecuador is the second largest exporter and the main exporter from South and Central America. Several African countries export tilapia to the USA (Table 3). In Europe, the UK and Spain have exported some tilapia but the bulk of the exports represented in Table 10 are from Canada.

Table 10. Imports into USA of frozen tilapia fillets by country of origin

	2004	2005	2006	2007	2008	2009
	(1000 tonnes)					
China	28.1	44.1	63.3	87.5	87.2	100.7
Indonesia	4.3	6.4	7.1	8.6	9.6	8.8
Taiwan PC	2.7	3.1	3.1	2.6	2.1	2.3
Thailand	0.7	0.9	0.2	0.0	0.4	0.7
Ecuador	0.2	0.3	0.2	0.4	0.5	1.1
Viet Nam	0.0	0.4	0.0	0.1	0.0	0.2
Panama	0.1	0.2	0.2	0.2	0.4	0.3
Brazil	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.1	0.2	0.3	1.2	0.4	0.8
Total	36.2	55.6	74.4	100.6	100.6	114.8

Source: GLOBEFISH

Table 11. Imports into USA from various locations in whole-weight equivalents*, in tonnes

	China	Ecuador	Other Asian	Other S & C America	Africa	Europe & North America	Total
2002	44 249	22 746	42 674	21 957	13	79	131 716
2003	86 794	31 783	46 135	24 835	21	2	189 570
2004	127 645	34 192	53 782	30 861	39	30	246 548
2005	179 575	35 933	61 728	41 620	61	28	318 945
2006	253 497	36 557	56 419	41 611	0	0	388 084
2007	324 738	40 549	53 261	51 354	70	145	470 118
2008	329 874	29 713	64 795	58 569	18	40	483 009
Jan-Nov 2009	322 196	30 905	50 747	48 807	22	0	452 676

* Whole-weight equivalents were calculated as 1.1 times the weight of whole tilapia and 3.3 times the weight of fillets

Source: NMFS, Foreign Dataset

From Table 12, USA tilapia exports and re-exports are marginal compared to imports in Table 11. Mexico is the largest recipient of USA exports although quantities have declined until 2008. In 2009, cumulative values from January to November indicate exports to Mexico have recovered in 2009 compared to 2008 values. Exports to a number of South and Central American countries including, Aruba and Guatemala, have also increased over time. In Asia, most exports in recent years are destined to China, Taiwan Province of China and Thailand. Exports to Asia and North America have remained relatively stable over time whilst exports to Europe have slightly increased in 2008 and 2009. Exports to North America include Canada and Bermuda. In Europe, the USA is recorded to have exported to a number of countries in different years. These countries are Belgium, Germany, Italy, Netherlands, Portugal, Switzerland, Spain and Ukraine. Exports to Africa and the Middle East are negligible.

Table 12. Exports and re-exports from USA to different locations in whole-weight equivalents*, in tonnes

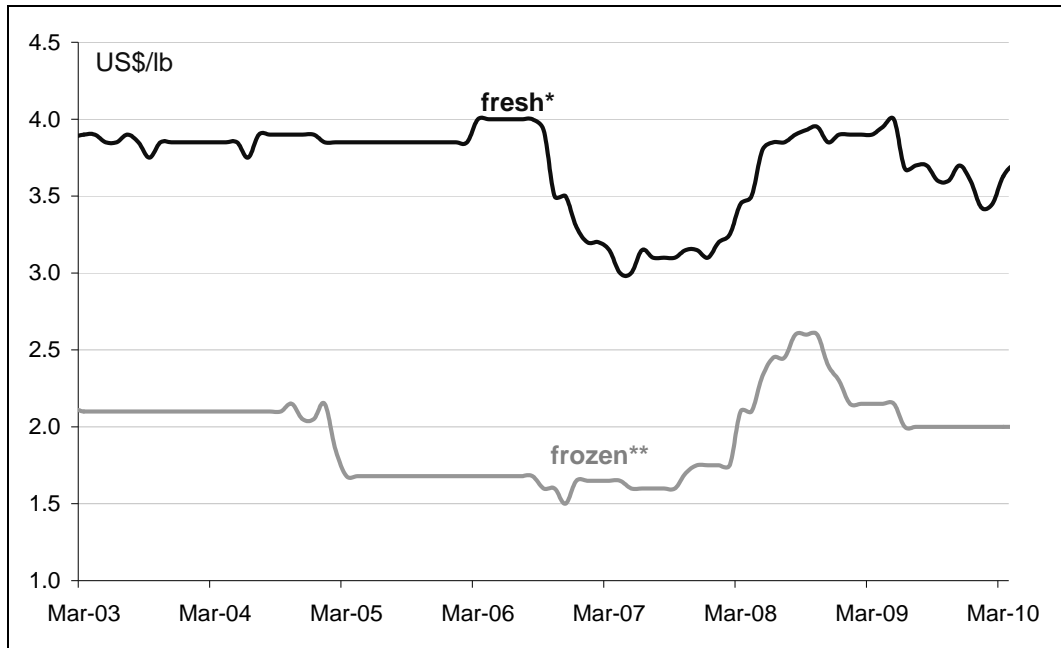
	Mexico	Other S&C America	Asia	North America	Europe	Africa & Middle East	Total
2002	8,843	121	297	34	14	0	9,309
2003	11,384	55	305	37	11	0	11,792
2004	6,35	170	15	180	36	11	7,247
2005	8,801	270	72	159	18	14	9,333
2006	9,132	935	97	96	10	2	10,272
2007	2,682	1,857	397	98	2	0	5,036
2008	2,506	2,732	282	85	55	0	5,659
Jan-Nov 2009	6,174	1,669	918	784	74	1	9,620

* Whole-weight equivalents were calculated as 1.1 times the weight of whole tilapia and 3.3 times the weight of fillets.

Source: NMFS, Foreign Dataset

The EU tilapia market is still very small, although it is slowly growing. This is due to tilapia being increasingly recognised and appreciated in European markets over other fish such as pangasius and Nile perch. The UK is the largest tilapia market. In UK supermarkets, prices are approximately USD 4/kg for whole frozen tilapia and USD 16/kg for whole fresh tilapia. Despite the efforts at farming tilapia in Europe, most tilapia is imported. Pescanova, the main Spanish seafood trader and producer has aimed to market 10 000 tonnes of tilapia in 2009 from their production plant in Brazil. Also, this same company is investigating the potential for tilapia production in Mozambique and Namibia. Unfortunately, tilapia import statistics are aggregated together with other freshwater species so the development of tilapia imports in the EU is not clear. Nevertheless, from Chinese export statistics (Table 5), European imports have increased from over 200 tonnes in 2002 to 8 000 tonnes in whole-weight values. Also, exports to the EU from the USA have increased from 14 tonnes in 2002 to 55 tonnes in 2008 in whole-weight values. Furthermore, if we consider imports from African countries into the EU (e.g. Zimbabwe and Uganda) and imports from other Asian and South and Central American countries, then we can estimate European tilapia imports were at least 9 000 tonnes in whole-weight values in 2008.

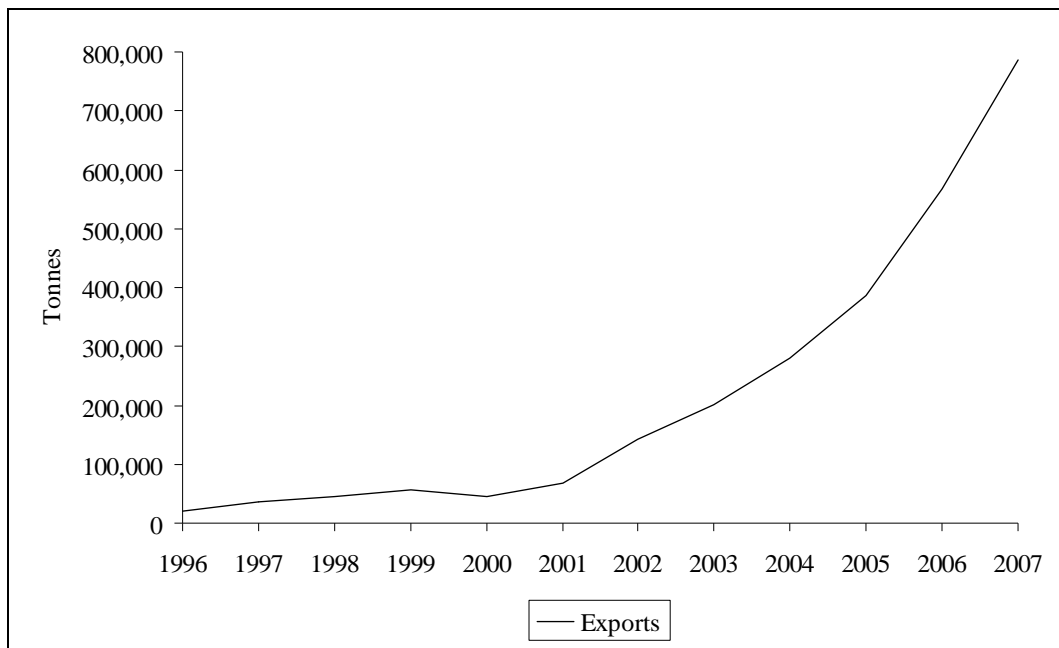
Graph 5. Wholesale price tilapia fillets: USA



6. INTERACTION BETWEEN WORLD TILAPIA MARKETS

The expansion of urban markets and the development of markets in developed countries have increased international trade over time. Low production costs coupled with high international prices have made it very profitable to export tilapia. This has resulted in tilapia having a significant presence in international markets over the last decade. Unfortunately, it is not possible to obtain an exhaustive picture of trade statistics since few countries identify the quantities imported or exported of tilapia. FAO FishStat trade statistics identify some exporting countries, with the United States representing over 90 percent of the import statistics. For exports, China (Mainland and Taiwan Province) represent over 90 percent of the export statistics. Nevertheless, the trade data provided by FishStat is enough to highlight that tilapia trade has increased over time since these are the major importing and exporting countries. In Graph 6, the development of world tilapia exports (re-exports not included) in whole weight values is presented. The increasing presence of tilapia in international markets is evident since the turn of the century, with almost a third of world farmed production being exported in 2007 according to FAO data.

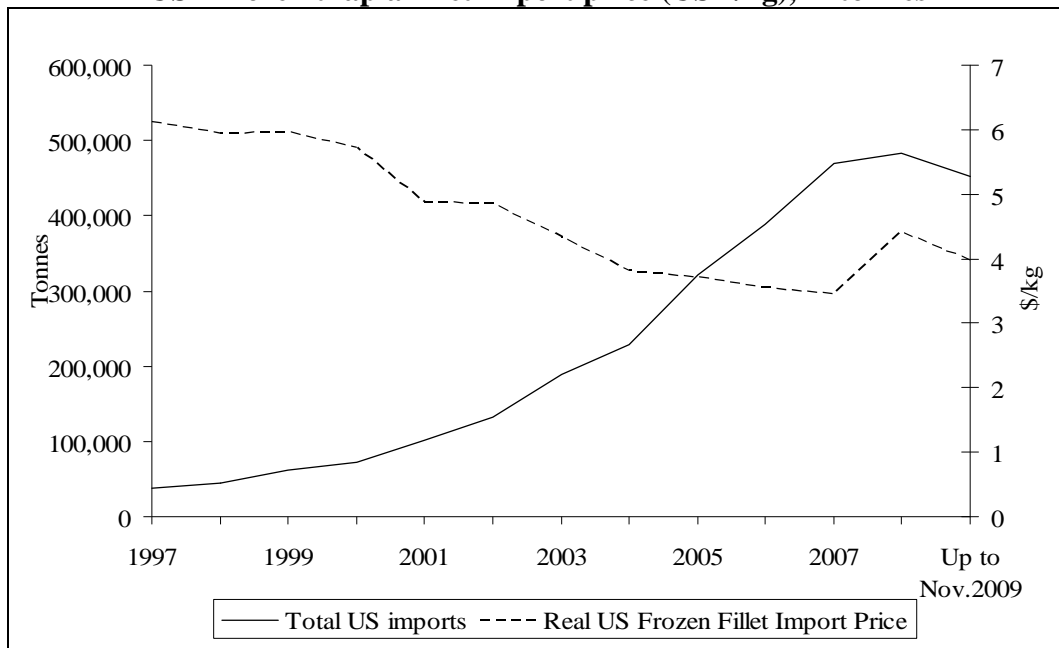
Graph 6. Annual quantities of world tilapia exports (whole-weight equivalents), in tonnes



Source: FAO 2009a, d

The fast increase in international trade is mainly due to the increase in demand for imports from the USA. In Graph 7, the development of total USA tilapia imports in whole weight value together with the real USA import price for frozen fillet is presented. An inverse relationship between price and quantity is evident until 2007. Total USA imports increased rapidly from over 29 000 tonnes in 1996 to over 470 000 tonnes in 2007 while real tilapia frozen fillet prices declined from USD 6.1/kg to USD 3.5/kg during this time period. However, in 2008, real prices increased to USD 4.4/kg together with imports (483 000 tonnes) due to the decline in Chinese exports during this year. This decline was caused by the extreme cold winter in early 2008 in China which wiped out whole production areas. Furthermore, producers preferred to sell tilapia in the domestic market since prices were higher than those which importers were willing to pay. On the other hand, in 2009, Chinese exports increased but the global financial crisis reduced demand for tilapia and imports of other species. This explains the drop in total USA tilapia imports (452 000 tonnes) and real tilapia frozen fillet prices (USD 4.0/kg) in 2009 (cumulative January through November). The cumulative USA imports from January to November 2009 are 25 000 tonnes less than in the same time period in 2008 (478 000 tonnes). This suggests a decline in annual USA tilapia imports in 2009.

Graph 7. Total USA tilapia import (whole-weight equivalents) and real USA frozen tilapia fillet import price (USD/kg), in tonnes



Source: NMFS, Foreign trade data

The development in domestic and international markets will motivate producers to supply tilapia to the most valuable market. This, as for any good, would reduce differences in value between markets until the only difference left is the cost of transportation. However, the variety of production methods and environments result in differences in quality and production costs between producers worldwide. Different quality goods are often regarded as separate products in a market and so prices are likely to be different between tilapia products. This will allow producers to have different production costs depending on the quality of the product they supply to the market.

Furthermore, inadequate transport logistics and food safety issues restrict the movement of tilapia to the most profitable markets. This is the case for Egypt, the world's second largest producer. High production costs and food safety concerns from the EU and USA has restricted most Egyptian tilapia to local markets. In addition, consumers differentiate between different tilapia products. In Egypt for example, there is a preference for fresh to frozen fish. This results in producers targeting specific markets rather than targeting the most profitable markets, creating segmentation in the world's tilapia markets.

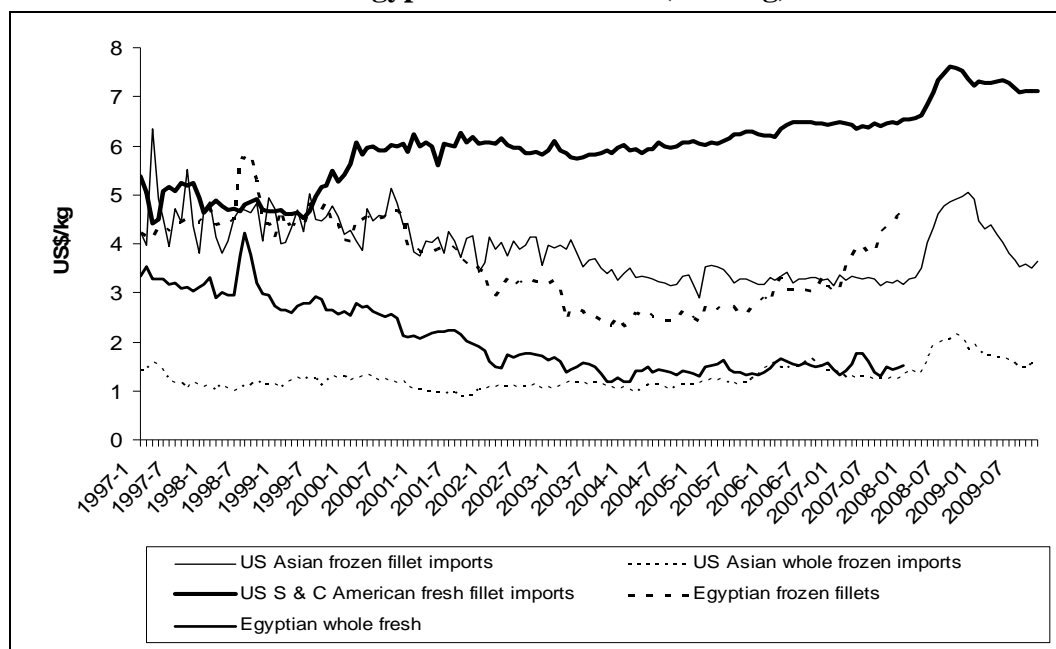
Understanding the development of world tilapia markets is not an easy task due to the large numbers of tilapia producers and exporters all over the world. Furthermore, data from most tilapia markets is very limited. This is because tilapia is not identified as a separate commodity item in the statistics of most countries but is grouped with other freshwater species.

Norman-López and Bjørndal (2009) have investigated the econometric relationship between tilapia markets in Africa, Asia and South and Central America. For this, they used USA import prices of fresh tilapia products from South and Central America and frozen tilapia products from Asia as proxies to represent the local markets within these regions. Prices of the most important fresh and frozen tilapia products from the largest Egyptian wholesale seafood market have also been used to represent tilapia prices in the African continent since

Egypt is the largest producer in the region. Graph 8 presents the prices of frozen tilapia fillets and whole fresh tilapia in the Egyptian market from January 1997 to December 2007, and USA import prices of frozen tilapia fillets and whole frozen tilapia from Asian countries and fresh tilapia fillets from South and Central American countries for the period January 1997 to November 2009. For the USA market, prices of frozen import products show similar patterns. Both of these products have declined until 2008 when prices increase due to an extreme cold winter in China impacting Chinese exports. Then in 2009 prices dropped again due to a decline in demand, due to the financial crisis and by low groundfish prices. On the other hand, fresh fillet import prices have increased at a consistent rate since October 1997. In 2008, fresh fillet import prices show a sharper increase. This is possibly due to South and Central American producers benefiting from the reduction in Chinese exports in the same year. Prices of Egyptian whole fresh tilapia and frozen fillets also show similar patterns. These prices declined continuously up to 2004 and increased thereafter.

At first sight, the similarity in the patterns of frozen products imported from Asia into the USA and fresh and frozen tilapia products in Egypt suggest tilapia products in the same region are related. This a priori observation suggests consumers do not differentiate between different tilapia products from the same region. On the other hand, the different patterns between the prices of tilapia products from the various regions (Africa, Asia and South and Central America) indicate tilapia markets across different regions are not related. This is likely to be due to the differences in quality, transportation costs and production methods for the different regions as discussed above.

Graph 8. Monthly USA import prices of whole frozen and frozen tilapia fillets from Asia and fresh tilapia fillets from South and Central America, as well as El Obour wholesale prices for Egyptian fresh tilapia (grade 1) and Egyptian frozen fillets (USD/kg)



Sources: NMFS, Foreign Trade Data and El Obour market

The market integration results from Norman-López and Bjørndal (2009) have indicated that no competition exists between the largest producer regions in South East Asia, South and Central America and Africa. Therefore, the tilapia products from these regions cannot be considered the “same” product. These results do not come as a surprise since the research, in

Norman-López and Asche (2008), on the competition between fresh tilapia fillets (which are mainly imported from South and Central America) and frozen tilapia fillets (which are mainly imported to the USA from South-East Asia) found that these products do not belong to the same market.

Different tilapia products do not compete in the same market even if they are from the same country or region. The market segmentation between the two South-East Asian tilapia products imported into the USA is likely to be due to consumers increasingly giving preference to fresh fillets rather than whole fish as the former is easier and faster to cook.

The market segmentation between Egyptian whole fresh tilapia and frozen tilapia fillets is most likely to be due to Egyptian consumers preferring fresh to frozen fish.

The high degree of segmentation in world tilapia markets means tilapia products are competing with different seafood products. In Egypt, whole fresh tilapia competes against the most appreciated farmed fish which is whole fresh mullet. In the USA market, fresh tilapia fillets are taking market share away from wild whole red snapper and fresh fillets of sea dab and blackback flounder. Furthermore, farmed pangasius and tilapia have been suggested to compete with wild groundfish species, although this relationship has not been econometrically tested as far as the authors are aware. With respect to farmed species, no relationship has been identified between fresh or frozen tilapia fillets and fresh or frozen USA catfish fillets. The competition identified between tilapia and several wild species is new because consumers have previously considered the attributes of farmed and wild fish to be unrelated.

The change in the relationship between wild and farmed fish in seafood markets is likely to be possible due to the overfishing of wild stocks coupled with the expansion of a variety of aquaculture products, such as tilapia, that are able to adapt to changes in demand. Changes in lifestyles are leading consumers to increasingly demand products that are easy to cook and ready meals. In Asia, USA and Europe, 72 percent, 64 percent and 54 percent of individuals have indicated that they purchase ready made meals frequently or occasionally instead of traditional meals made from scratch. Ready meals, breaded and other value-added products often make it difficult for consumers to differentiate between different wild and farmed species. This similarity (or inability to distinguish) between wild and farmed products has allowed tilapia to win market shares by supplying a wide variety of products at lower prices. In addition, producers are learning from the experiences of shrimp and salmon by controlling production and improving the logistics and marketing process. This has led to reliable supplies, lower costs and better quality products, further increasing the share of tilapia in local and international markets.

The increasing appreciation of tilapia in developed and developing markets has resulted in an impressive growth in production and trade in little more than a decade. This expansion of production and trade has in a way put tilapia in the same league as farmed salmon. Nevertheless, tilapia production is unlikely to follow the same path of development as the salmon industry. This is because the integration between world salmon markets has only allowed few but very competitive producers to exist in the market. For tilapia, the segmentation of world tilapia markets allows tilapia being produced by a large number of producers, with different competitive abilities, in all continents at least for the foreseeable future. However, in the long term, differences in quality between highly developed international markets and developing markets are likely to decline. This is due to improved

production methods, lower transport and production costs coupled with the expansion of urban markets demanding higher quality tilapia in developing countries.

7. OVERVIEW AND DISCUSSION

This report has investigated the increasing importance of tilapia in meeting the growing demand for fish products. The discussion has highlighted the numerous characteristics of tilapia that make farming this fish possible in a wide variety of production systems in all continents. Following this, the comparative advantage of some regions in tilapia production due to the climatic conditions of the region has been examined. Finally, the markets for tilapia have also been investigated.

Tilapia has been singled out as the perfect farmed fish. This is because this fish is easy to farm using a wide variety of production methods, disease resistant, and readily accepted by consumers from the most marginal markets within developing countries to premium markets in developed countries. Nevertheless, research investigating the markets for tilapia is still very limited because the expansion of tilapia into new markets has almost entirely occurred over the last decade.

Tilapia production is carried out in earthen ponds, cages and tanks at levels of intensity that range from extensive to intensive in all continents. The characteristics of tilapia mean that producers in high temperature regions have a comparative advantage as they are able to use methods with lower production costs. As a result, regions in South-East Asia, Africa and South and Central America have emerged as the largest tilapia producers in the world. Tilapia markets in these regions are also important. Tilapia still provides a source of protein to poor people. Moreover, the expansion of urban markets has increased demand over time. Nevertheless, the world markets that have expanded fastest in the last decade are located in the USA and the EU. Demand was originally reduced to immigrant communities living in these regions. However, during the last decade, growth in demand has been fast because consumers regard favourably the white meat, easiness to fillet and mild flavour of tilapia.

The large numbers of tilapia producers and exporters in all continents makes it complicated to understand the global market for tilapia. Furthermore, market data are very limited except for the USA where tilapia import data is readily available. The results of Norman-López and Bjørndal (2009) highlighted the high segmentation of world tilapia markets.

Overall, the segmentation of the tilapia market means that different tilapia products will compete in different seafood markets. Yet, despite the huge potential that tilapia has for further productivity growth, its recent development has led to very little research compared to other established species like salmon and prawns. For the near future, it is possible to say that despite the differences in competitiveness between different regions, the heterogeneity of tilapia producers will prevail. However, in the long term, differences in quality between highly developed international markets and developing markets is likely to decline. This is due to improved production methods, lower transport and production costs coupled with the expansion of urban markets demanding higher quality tilapia in developing countries. As a result, trade in developing countries from within and across regions is likely to expand. This is likely to affect local producers currently supplying urban markets if they are unable to compete with other producers in the region. However, the livelihoods of small scale tilapia producers supplying tilapia to the poorest market segments may not be affected. This is because the price and quality of tilapia in these markets are very low. Therefore, exporters are

most likely to target markets that pay a price premium for high quality value-added product forms of tilapia.

Annex I: Freshwater Fish Importers in Europe

<i>COMPANY</i>	<i>STREET</i>	<i>ZIP</i>	<i>TOWN</i>	<i>CODE</i>	<i>TEL.</i>	<i>FAX</i>	<i>E-MAIL</i>	<i>WEB SITE</i>
AUSTRIA								
ELFIN FEINKOST GMBH	Wegscheiderstr. 27	4060	Leonding	43	732383601	732383601-82	office@elfin.at	www.elfin.at
SCHENKEL ERICH & SOHN	Hasenauerstr. 4	1191	Wien	43	13671111	13671112	info@schenkel.at	www.schenkel.at
BELARUS								
SANTA IMPEX BREST LTD.	Sov. Konstitucii 26/1	224032	Brest	375	162299110	162299119	secretary@santa-impex.com	
BELGIUM								
BEMKA - LA MAISON DU CAVIAR	Quai des Usines 22230302	1000	Bruxelles	32	27368663	27346322	ines.bemka@skynet.be	www.caviarlover.com
BISSCHOPS VERACHTER N.V.	Oudestraat 5	2630	Aartselaar	32	38705130	38705188	info@avilafood.com	www.avilafood.com
CASPIAN TRADITION SA CAVIAR	Av. des Pâquerettes 55	1410	Waterloo	32	23549790	23531634	info@caspiantradition.com	www.caspiantradition.com
COLRUYT S.A.	Edingensesteenweg, 196	1500	Halle	32	23601040	23600207	colruyt@colruyt.be	www.colruyt.be
DELHAIZE "LE LION" S.A.	Rue Osseghem 53	1080	Bruxelles	32	24122111	24122194	info@delhaize.be	www.delhaize-de-leeuw.be
GABRIEL S.C.R.L.	Av. de Norvège 1	4960	Malmedy	32	80799479	80338644	malmedy@gabriel.be	www.gabriel.be
SETRACO N.V.	Oostendsebaan 100	8470	Gistel	32	059270727	059275885	info@setraco.be	www.setraco.be
SOLEA INTERNATIONAL	Coquilhatstraat 37	B-2000	Antwerpen	32	32489214	32489215	solea@soleainternational.com	www.soleainternational.com
THALASSA SEAFOODS NV/SA	Oude Leeuwenrui 40	2000	Antwerpen	32	32261690	32261170	mail@thalassa-seafoods.com	www.thalassa-seafoods.com
CZECH REPUBLIC								
LISNO A.S.	Konopiste 24	256 01	Benesov u Prahy	420	30121506	30121506	obehoa@lisno-ryby.cz	www.lisno-ryby.cz
MIPL	Sumická 2325	688 01	Uherský Brod	420	572637190	572635090	mipl@mipl.cz	www.mipl.cz
RYBARSTVI CHLUMEC A.S.	B. Nemcove 711/IV	503 51	Chlumec nad Cidlinou	420	495703050	495703055	rybychlum@rybychlumec.cz	www.rybychlumec.cz
RYBARSTVI KARDASOVA RECICE, SPOL S.R.O.	Nádražní 574	378 21	Kardasova Recice	420	384383057	384383057	info@e-ryby.cz	www.e-ryby.cz

COMPANY	STREET	ZIP	TOWN	CODE	TEL.	FAX	E-MAIL	WEB SITE
RYBARSTVI LIBECHOV	Bozí voda 289	277 21	Libechov		420 206697133	315697133	vacek.libechov@worldonline.cz	www.rybarstvilibechov.cz
RYBARSTVI TABOR A.S.	Rybárská 801	379 01	TREBON		420 384701510	384701554	rybarstvi@rybarstvi.cz	www.trebon.rybarstvi.cz
RYBARSTVI TREBON A.S.	Rybarska 801	379 85	Trebon		420 384701510	384701554	rybarstvi@rybarstvi.cz	www.trebon.rybarstvi.cz
RYBNIKARSTVI POHORELICE A.S.	Videnska 717	691 23	Pohorelice		420 626424372-5	626424243	rybnikarstvi.pohorelice@iol.cz	www.rybnikarstvi-pohorelice.cz
SEAFOOD S.R.O.	Zborovská 49		Praha 5		420 257325161	257311092	seafood@seafood.cz	www.seafood.cz
STICI LIHEN - ESOX S.R.O.	Jordanska 366	390 01	Tabor		420 381252694	381252695	pecha@esoxfish.cz	www.esoxfish.cz

DENMARK

COOP DENMARK A/S	Roskildevej 65	2620	Albertslund	45	864386	43863386		www.coop.dk
DANSK SUPERMARKED GRUPPEN	Bjødstrupvej 18	8270	Højbjerg	45	89303030			www.dsg.dk
EMBORG FOODS A/S	Lansen 19	9230	Svenstrup J.	45	96376500	96376501	emborg@emborg.com	www.emborg.com
FLYING SEAFOOD DK	Hvidovrevej 80 E, st.	2610	Rødovre	45	36898015	36898016	mail@flyingseafood.dk	www.flyingseafood.dk
J. CHR. JUHL FISKEEKSPORT A/S	Sdr. Havnekaj 16	5300	Kerteminde	45	65321519	65324219	mail@jchrjuhl.dk	
MONDO MAR MARINE FOODS APS	Kai Lindbergsgade 38	7730	Hanstholm	45	96557000	96557001	per@mondomar.dk	www.mondomar.dk
SCANFISH DANMARK A/S	Kai Lindbergsgade 50-52	7730	Hanstholm	45	97962122	97961440	info@scanfish.net	www.scanfish.net
SEACO A/S	Havnegade 6	9850	Hirtshals	45	72286960	72286969	info@seaco.dk	www.seaco.dk

ESTONIA

AVEKTRA	Punane 72 A Punane 72a	13619	Tallinn	372	6024777	6024770	avektra@avektra.ee	www.avektra.ee
PARNU LAHT LTD.	Karusseli 24B	80015	Parnu	372	4448823	4433214	laht@laht.ee	
PROFIT PLUS OÜ	Vikerlase 14-52	49604	Mustvee, Jõgevamaa	372	7734435	7734434	info@profitpluss.ee	www.profitpluss.ee

FINLAND

FINNISH FRESHFISH OY KALAMESTA	Sörnäistenkatu 7	00580	Helsinki	358	97744110	97534069	info@kalamesta.fi	www.kalamesta.fi
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FRANCE

ALLIANCE ELABORES-LA DIEPPOISE	Route Nationale 28	76340	Foucarmont	33	2975800	2975806	annick.bourgeois@alliance-elabores.fr	www.gewy.fr
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COMPANY	STREET	ZIP	TOWN	CODE	TEL.	FAX	E-MAIL	WEB SITE
AQUACULTURE SAS	7, rue Georges Honoré	62200	Boulogne-sur-Mer	33	21320362	21321817	aquaculture@wanadoo.fr	
ARCTICA PARTNERS	10 Place Gustave Charpentier	62200	Boulogne-sur-Mer	33	321329095	321329096	arctica@wanadoo.fr	
ARGIS GALACSEA	15 Rue Florian Laporte	56100	Lorient	33	297831000	297832500	argis@wanadoo.fr	
AUCHAN	200, rue de la Recherche	59650	Villeneuve d'Ascq	33	328376700	320675520		www.auchan.fr
BORDELAISE DE MAREE S.A.	24, 25 Place des Capucins	33031	Bordeaux Cedex	33	556336500	556336507	bordelaise.mar2@wanadoo.fr	www.bordelaise-maree.com
CASINO	28, rue des Vieilles Vignes	77316	Marne-la-Vallée Cedex 2	33	161447000	161447001	webmaster@groupe-casino.fr	www.groupe-casino.fr
CME - LES PECHEURS D'ETAPLES	6, rue du Commandant Charcot	62200	Boulogne-sur-Mer	33	321306154	321872589	cme.charcot@free.fr	
COSMOS FOODS	16 Rue Sylvain Colinet	77300	Fontainebleau	33	160710258	160723080	cosmosfoods@wanadoo.fr	
DAVIGEL S.A.S	POB 41	76201	Dieppe Cedex	33	235047600	235401431	jean-louis.meuric@fr.nestle.com	www.davigel.fr
DEMARNE FRERES S.A.	rue Benoît Frachon	56100	Lorient	33	297881656	297880952	contact@demarneboulogne.com	www.charly-guenec.com
ERIMER SA / GROUP FRIAL	ZA du Mourillon/Rue Lavoisier	56530	Queven	33	297054845	297054846	bruno.denieul@erimer-sa.com	
FJORD IMPORT	88/100 Route de Paris	62222	Saint-Martin-Boulogne Cedex	33	321991599	321835924	y.golliot@fjordimport.fr	www.fjordimport.fr
GELAZUR	455, Promenade des Anglais	06205	Nice Cedex 3	33	493180705	493185660	contact@gelazur.com	www.gelazur.com
GROUPE ATLANTYS PRF SAS	1, Ave. des Savoies/P.L.A. 358	94599	Rungis Cédex	33	145127171	145127135	ac2g@atlantys.fr	www.atlantys.fr
HALIOS - PECHEURS BRETONS	6 Rue Lucien le Lay	29760	Saint-Guérolé/Penmarc'h	33	298586007	298588282	contact.halios@pecheursbretons.com	www.groupelegraet.fr
LEGRAND ET MALO S.A.	2, rue du Bastion	76060	Le Havre Cedex	33	235193200	235216779	legrand.malo@wanadoo.fr	http://perso.orange.fr/legrand.malo/
MEDI PECHE S.A.	40 quai Maximin Licciardi	34202	Sète	33	467466720	467466737	medipeche@medipeche.com	www.medipeche.com
PICARD SURGELES	19, Place de la Résistance	92446	Issy-les-Moulineaux	33	141086666	146620600		www.picard-surgeles.fr
PISCICULTURE DE L'ETANG DE VAUX	route de Vaux	54400	Cosnes-et-Romain	33	382241940	382254350	lakdar.tamazouzi@libertysurf.fr	
POMONA S.A.	2 et 4, Pl. du Général de Gaulle	92164	Antony Cedex	33	155596100		communication@pomona.fr	www.pomona.fr
SAVIGNY SURGELES FRAIS SAS	3, rue Brandly	33603	Pessac Cedex	33	556153131	556152615	LM@savigny-sf.com	www.savigny-sf.com
SOVINTEX S.A.	8, rue de la Terrasse	75017	Paris	33	147636465	147636445	sovintex@sovintex.com	www.sovintex.fr

GERMANY

AHRENHORSTER EDELFISCH GMBH & CO. KG	Bornhagenweg 3	49635	Badbergen	49	54336886	5433902594	info@wallerzucht.de	www.wallerzucht.de
AICO GMBH	Karl Friedrichstr. 98	79312	Emmendingen	49	7641920065	7641920092	AlexanderLeber@aico-gmbh.de	www.aico-gmbh.de
ALDI EINKAUF GMBH & CO. OHG	Burgstrasse 37	45476	Mülheim	49	01803292534		mail@aldisued.de	www.aldi-sued.de

<i>COMPANY</i>	<i>STREET</i>	<i>ZIP</i>	<i>TOWN</i>	<i>CODE</i>	<i>TEL.</i>	<i>FAX</i>	<i>E-MAIL</i>	<i>WEB SITE</i>
ALL-FISH HANDELS GMBH	Eckernförderstr. 313	24119	Kronshagen	49	4315458407	4315458409	mail@all-fish.de	www.all-fish.de
ALTONAER KAVIAR IMPORT HAUS	Schmarjerstr. 44	22767	Hamburg	49	40381780	40387973	info@aki-hamburg.de	www.aki-hamburg.de
BETA FOOD GMBH & CO. KG	Am Westkai 39	70329	Stuttgart	49	71193235050	7113260427	y.do@beta-stuttgart.de	www.beta-stuttgart.de
BREMERHAVENER FISCHAUKTIONS	Fischkai 15	27572	Bremerhaven	49	471974440	471974444	info@fischauktion.de	www.fischauktion.de
CASPIAN CAVIAR ARDABILI GMBH	Humboldtstr. 35	22083	Hamburg 1	49	402269991-0	402269991-27	info@caspiancaviar.de	www.caspiancaviar.de
CONTI-MAR FISHIMPORT GMBH	Tibarg 35	22459	Hamburg	49	40584070	40585381	info@conti-mar.com	www.conti-mar.com
DAN LACHS GMBH	Lise Meitner str. 16	24223	Schwentinental	49	43078233382	43075420	info@danlachs.de	www.danlachs.com
DEUTSCHE SEE	Maifischstrasse 3-9	27572	Bremerhaven	49	471133198	471131336	info@deutsche-see.de	www.deutsche-see.de
DIECKMANN & HANSEN GMBH	Grosse Elbstrasse 210	22767	Hamburg	49	4038615023	40385542	info@dieckmann-hansen.com	www.dieckmann-hansen.com
EDEKA MINDEN-HANNOVER HOLDING	Wittelsbacher Allee 61	32427	Minden	49	5718020	5718025561	info@minden.edeka.de	www.edeka.de
EURO FOOD	Baumgartenstr. 5	74906	Bad Rappenau	49	706699030	7066990320	info@euro-food.de	www.euro-food.de
FEMEG PRODUKTIONS UND VERTRIEBS GMBH	Rudolf Diesel Strasse	22941	Bargteheide	49	453220400	4532204020	info@femeg.de	www.femeg.de
FIMEX TIEFKÜHL GMBH	Fischkai 15	27572	Bremerhaven	49	471976071	47171363	info@fimex.de	www.fimex.de
FLAMINGO FOOD GMBH & CO. KG	Fischkai 23	27572	Bremerhaven	49	471972495-62	471972495-77	info@flamingo-gv.de	www.flamingo-gv.de
FOLLOWFISH	Karlstraße 2	88045	Friedrichshafen	49	7541289030	7541289022	info@followfish.de	www.followfish.de
FRISCHE PARADIES-GOEDEKEN GMBH	Große Elbstr. 210	22767	Hamburg	49	4038908-0	4038908-110	csievers@frischeparadies.de	www.frischeparadies.de
H.-J.FIEDLER MEERESDELIKATESSEN	Packhalle IV nr. 34	27572	Bremerhaven	49	471932230	4719322332	info@fisch-online.de	www.fiedlers-fischmarkt.de
HAMBURGER FEINFROST GMBH	Grosse Elbstr. 158	22767	Hamburg	49	40399292-0	40399292-39	hamburger_feinfrost@hafro.de	www.hafro.de
IMPERIAL CAVIAR GMBH	Rheinbabenallee 14	14199	Berlin-Schmargendorf	49	3020456690	3020456699	info@imperialcaviar.de	www.imperialcaviar.com
INTERCONT GROSSHANDELS GMBH	Schleissheimerstr. 87	85748	Garching / München	49	893292024	893205177	intercont@t-online.de	www.itc-itc.de
KAISER'S TENGELMANN AG	Lichtenberg 44	41747	Viernsen	49	021621050	0216233499		www.kaisers.de
LIDL DIENSTEISTUNG GMBH & CO. KG	Rötelstrasse 30	74166	Neckarsulm	49	08004353361		kontakt@lidl.de	www.lidl.de
LUEBBERT, FRIEDRICH WILHELM	Wittlingstr. 10	27572	Bremerhaven	49	47197990	4719799191	mail@luebbert.de	www.luebbert.de
LUNDI	Wischhofstr. 1-3, Halle 1	24148	Kiel	49	431723000	431723002	info@lundi-seafood.de	www.lundi-seafoods.de
METRO	Metro Straße	40235	Düsseldorf	49	01805636760	01805780500	Kontakt@metro24.de	www.metro24.de
NIGGEMANN FOOD FRISCHEMARKT	Speicherstr. 6-8	44809	Bochum	49	2349037189	2349037124	info@niggemann.de	www.niggemann.de
NORDIC MEERESFRÜCHTE	Deiningen Weg 94	92318	Neumarkt	49	9181905081	918120325	nm@nordicseafood.com	www.nordicseafood.com

COMPANY	STREET	ZIP	TOWN	CODE	TEL.	FAX	E-MAIL	WEB SITE
PEDERSEN, FR. GMBH	Grosse Elbstr. 152	22767	Hamburg	49	4052299390	40522993910	info@hummer-pedersen.de	www.hummer-pedersen.de
RASSAU SEAFOOD GMBH	Virchowstr. 17-19	22767	Hamburg	49	403760020	40363117	info@rassau-seafood.de	www.rassau-seafood.de
SCHICH	Im Felde 17	27574	Bremerhaven	49	47136014	47132089	info@schich.de	www.meeresseggen.de
TERNÄBEN SERVICE GMBH	Im Gewerbegebiet 15	49459	Lembruch	49	544799390	5447993933	info@ternaeben.de	www.ternaeben.de
TROIBER, XAVER	Vilshofenerstr. 31	94544	Hofkirchen	49	8545170	85451740	info@troiber.de	www.troiber.de
ZAMEK-MEINHARDT SEAFOOD-SERV. GMBH & CO	Wittekindallee 16	32423	Minden	49	571974030	5719740320	seafood@zamek-meinhardt.de	www.zamek-meinhardt.de

HUNGARY

HAL-INNO FISH KFT.	Kavicsbanya tó 0173/2	2310	Szigetszentmiklós	36	13409467	13409467	info@halinnofish.hu	www.halinnofish.hu
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ITALY

AGROITTICA LOMBARDA SPA	Via Kennedy, 101/A	25012	Viadana di Calvisano (BS)	39	0309686991	030968433	info@agroittica.it	www.agroittica.it
CALABRIA PESCA S.R.L.	ZI SS 112 km 5,600	89011	Bagnara Calabria (RC)	39	0966337040	0966337015	info@calabriapesca.it	www.calabriapesca.it
CAVIAR IMPORT SRL	P.le S.L. Giustiniani, 26	30170	Venezia, Mestre	39	041961610	041971011	info@caviale.it	www.caviar.it
CHEF PRONTO SERVICE SRL	Via Tavoleto, 93	47832	S.Andrea di S.Clemente (RN).	39	0541988996	0541987712	contact@chefprontoservice.com	www.chefprontoservice.com
COAM INDUSTRIE ALIMENTARI SPA	via Statale dello Stelvio 284/286	23017	Morbegno (SO)	39	0342604411	0342614066	info@coamspa.it	www.coamspa.it
COLDFISH SRL	Via Case Sparse 98	25080	Manerba del Garda (Brescia)	39	0365 654061	0365 654249	vendite@coldfish.it	www.coldfish.it
CONAD	Via Michelino, 59	40127	Bologna	39	051508111	051508414	info@conad.it	www.conad.it
ESSELUNGA SPA	Via Giambologna, 1	20096	Piottello (MI)	39	02923671	029267202	acq-freschi.mi@esselunga.it	www.esselunga.it
FIORITAL SRL	Località Marittima - fabbricato 114	30135	Venezia	39	0412409200	0412410708	info@fiorital.com	www.fiorital.com
FJORD SPA	Via Cassano Magnago, 120	21052	Busto Arsizio (VA)	39	0331681155	0331686353	salmoncompany@salmoncompany.com	www.salmoncompany.com
FROLLANPESCA SRL	Piazza Stefano Jacini, 14-15	00191	Roma	39	0636303887	0636306863	alexfr@tin.it	www.frollanpesca.com
GIO' MARE SRL	Via Sigismondo, 38	47900	Rimini	39	0547675446	05476775139	giomare@libero.it	www.giomare.net
GIOIOSO ITTICA SAS	Zona Ind. Sud/contr. S. Angelo	72015	Fasano (BR)	39	080-4389836	080-4389867	direzione@gioioso.it	www.gioioso.it
GORO PESCA	Via del Commercio, 3	44020	Goro /Ferrara	39	0533996478	0533995314	a.ballerini@goropesca.it	
GOURMET LINE SRL	Via di Trigoria, 45	00128	Roma	39	065062737	065060709	info@gourmetline.it	www.gourmetline.it

<i>COMPANY</i>	<i>STREET</i>	<i>ZIP</i>	<i>TOWN</i>	<i>CODE</i>	<i>TEL.</i>	<i>FAX</i>	<i>E-MAIL</i>	<i>WEB SITE</i>
GROUP BOVO SRL	Via XX Settembre, 133/Z	35047	Solesino (PD)	39	0429708620	0429770110	bovocommerciale@tin.it	
GS-GENERALE SUPERMERCATI SPA	Via Caldera, 21	20153	Milano	39	025473472	0248253277	servizio.clienti@supermercatis.it	www.supermercatis.it
LEPORE MARE SRL	Via dell'Agricoltura, 22/24		FASANO (Brindisi)	39	080.442.81.11	080.442.81.33	info@leporemare.com	www.leporemare.com
MARR SPA	Via Spagna, 20	47900	Rimini	39	0541746111	0541620668	info@marr.it	www.marr.it
METRO ITALIA CASH AND CARRY SPA	Via XXV Aprile, 23	20097	San Donato Milanese (MI)	39	0251712290	0251712454		www.metro.it
PAM	Via delle Industrie, 8	30038	Spinea (VE)	39	0415496111	0415411933		www.e-pam.it
PESCA PRONTA SPA	Via G. Durlì, 45	00054	Fiumicino (RM)	39	06658771	0665877207	info@pescapronta.it	www.pescapronta.it
ROYAL GREENLAND ITALIA S.P.A	Via Anastasio II, 274	00165	Roma	39	0639377256	0639388229	info@royalgreenland.it	www.royalgreenland.it
SUPERNOVA SRL	Via Eufrate, 10	00144	Roma	39	065427911	065918695	info@supernovafrozenfood.it	www.supernovafrozenfood.it

LATVIA

ROZULA LTD.	Brivibas iela 97/2	1001	Riga	371	7043241	7043313	rozula@rozula.lv	www.rozula.lv
SUDRABLINIS LTD	A. Dombrovska Street 23		Riga	371	67353070	67353261	info@sudrablinis.lv	www.sudrablinis.lv

LUXEMBOURG

GOURMET TRADE S.A.	Z.I., rue de Bettembourg	3378	Livange	352	514579	517848	gourmet2@pt.lu	
LA PROVENÇALE SARL	ZI. Grasbusch	3370	Leudelange	352	49891	4989333	info@provencale.lu	www.provencale.lu
LAKE HARVEST INTERNATIONAL	15 rue du Fosse	9522	Wiltz	352	26950775	26950776	sales@lakeharvest.com	www.lakeharvest.com

MONACO

ATLAS MARITIME	57, Rue Grimaldi, Le Panorama B	98014	Monaco	377	93508816	93254648	atlas@atlas-maritime.com	
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NETHERLANDS

AFFISH	Burg. van der Lelystraat 2	4285 BL	Woudrichem	31	183303484	183303375	info@affish.nl	www.affish.nl
ANOVA FOODS B.V.	Hambakenwetering 15	5231DD	Hertogenbosch	31	737502000	737502001	anova@anovafood.nl	www.anovafood.com
BONDSEAFOOD BV	Gijzenveld 9	4817 ZE	Breda	31	765711666	765812896	info@bondseafood.com	www.bondseafood.com
BULLMEAT BV	J.Duikerweg 5D	1703 DH	Heerhugowaard	31	725671090	725671099	info@bullmeat.com	www.bullmeat.com

<i>COMPANY</i>	<i>STREET</i>	<i>ZIP</i>	<i>TOWN</i>	<i>CODE</i>	<i>TEL.</i>	<i>FAX</i>	<i>E-MAIL</i>	<i>WEB SITE</i>
DAYSEADAY FRESH/FROZEN B.V.	Schulpengat 9	8321 WC	Urk	31	527684684	527681477	info@dayseaday.nl	www.dayseaday.com
DIL IMPORT-EXPORT BV	Kerklaan 40	1920	Akersloot	31	251312306	251315420	info@dilvis.com	www.dilvis.com
FELDT & DE BOER FISH BV	Foksdiep 32	8321 MK	Urk	31	527686995	527688505	info@feldtdeboer.nl	www.feldtdeboer.nl
FEMEG HOLLAND B.V.	Keteldiep 15	8320	Urk	31	527690566	527690049	jveerde@femeg.de	www.femeg.de
HOOGENDIJK IMPORT EXPORT	POB 10	3130 AA	Vlaardingen	31	102486666	102486600	info@hoogendijk.info	www.hoogendijk.com
IBRO MAR	Linatbaan 75	3045 AH	Rotterdam	31	104532050	104529055	info@ibromar.com	www.ibromar.com
KENFOOD	Van Voordenpark 9L	5301 KP	Zaltbommel	31	418510952	418516454	stefano@kenfood.nl	www.kenfood.nl
OCEAN FISH B.V.	Costerweg 1T	6702 AA	Waneningen	31	317428539	317428666	info@oceanfish.nl	www.oceanfish.nl
SEAFOOD CONNECTION B.V.	Het spijk 12	8320 WT	Urk	31	527687066	527687067	info@seafoodconnection.nl	www.seafoodconnection.nl
URK EXPORT B.V.	Zuidoostrak 8-10	8321 AA	Urk	31	527689689	527689690	sales@urk-export.nl	www.urk-export.nl

NORWAY

CAPE FISH AS	Nordkappveien 4	9750	Honningsvåg	47	78476960	78476969	bjorn.r.olsen@capefish.com	www.capefish.com
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POLAND

DAS P.H.	ul. Obornicka 2a Zlotniki k. Poznan	62-002	Suchy Las	48	618142077	618161778	biuro@das-ryby.com.pl	www.das-ryby.com.pl
DORYB	Podmiejska Str 2A	19-300	Elk	48	876290012	876290013	trade@doryb.pl	www.doryb.pl
DOS FISH PROCESSING COMPANY LTD	ul. Warszawska 15	84-300	Lebork	48	598633211	598622705	export@dos.com.pl	www.dos.com.pl
INTERFOOD SP. ZO.O	ul. Hryniewickiego 10-83	81-340	Gdynia	48	586613230	586207551	renata@interfood.pl	www.interfood.pl
MARE FOODS LTD.	Tanowska 2D	72-010	Police	48	913121300	913176855	marefoods@sz.home.pl	www.marefoods.pl
PRORYB SP. Z.O.O.	Ul. Zakopianska 1	84-230	Rumia	48	586710717	586712641	info@proryb.com.pl	www.proryb.com.pl
PSTRAG SP. Z.O.O. PPR	Nad Drweca 9	87-162	Lubicz	48	566633511/13	566633511	likiecki.piotr@op.pl	
RIEBER FOODS POLSKA S.A./KING OSCAR	Oddzial w Gniewinie	84-250	Gniewino	48	586706500	586706506	marketing@rieberson.no	www.kingoscar.pl
RYBHAND TRZCEILINSCY S.J.	Swietego Ducha 118/120	63-200	Jarocin	48	627473238	627476638	rybhand@rybhand.com.pl	www.rybhand.com.pl
SONA S.C. P.P.H.	ul. Myszkowska 25	42-350	Koziegłowki	48	343142435	343142222	sona@sona.pl	www.sona.pl
TASMAN FISH TRADING LTD.	Dabrowszczaków 39	10-542	Olsztyn	48	895275999	895279840	olsztyn@tasman.com.pl	www.tasman.pl

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PORTUGAL								
BRASMAR LDA.	Avenida Ferreira de Castro, 73 Guidoes	4480-734	Apartado, Trofa	351	252490070	252490079	geral@brasmar.com	www.brasmar.com
CRUSTAMAR - PRODUTOS ALIMENTARES, LDA	Rua das Industrias, lote 116- Massaná	2745-838	Queluz	351	213182690	213182693	geral@crustamar.pt	www.crustamar.pt
ROMANIA								
AGROALIM DISTRIBUTION S.R.L.	Calea Vitan nr 242, 17, Sector 3	040584	Bucharest	40	212006300	212006301	office@agroalim.ro	www.agroalim.ro; www.frigorifer.ro
KAVIAR HOUSE S.R.L.	Str. Presei nr. 6	01317	Bucharest 1	40	216678275	216678276	office@casacaviar.ro	www.casacaviar.ro
TULCO S.A.	Str. Portului nr. 40	820013	Tulcea	40	240516101	240519000	tulco@x3m.ro	
RUSSIAN FEDERATION								
FRESH AND FROZEN FOOD A/S	Priorova Str, 24-2	125130	Moscow	7	4952254825	4952254805	demidenko@fffood.ru	
OCEAN PRODUCT CO., LTD	24, Kuybysheva str.	197046	St. Petersburg	7	8127779070	8126550813	mail@domain.ru	www.oceanproduct.ru
PROD-KLOD LTD.	Losinoostrovskaya str.	141080	Moscow	7	4951882801	4951883201	crab-meat-union@portal.ru	www.crabsticks.ru
SP-HOLOD ZAO	Malaya Polianka 5, Office 3	109180	Moscow	7	4952383861	4952383861	martynov@ru.ru	www.gulfish.com
SPAIN								
AMEIXA DE CARRIL, S.L.	Punta Preguntoiro 20	36611	Vilagarcia de Arousa	34	986504461	986504083	contacto@ameixadecarril.com	www.ameixadecarril.com
ASS. MAYORISTAS PESCADO ASTURIAS	Avenida de Viella, nº 58	33420	Lugones (Siero) - Asturias	34	985267975	985267975	buzon@asociacionamppa.com	www.asociacionamppa.com
BERMEPESCA SL	Pol. Industrial Mijoa n. 2 - 2ª - Mód 7	20830	Mutriku (Gipuzkoa)	34	943604212	943607023	correo@bermepesca.com	www.bermepesca.com
BRISIÑA SL	Poligono Industrial "La Tomada"	15940	Puebla del Carmiñal - La Coruña	34	981833018	981833056	guilherme@brisina.es	www.actemsa.com
CADELMAR	Centro Logistico de Antequera parcela10	29200	Antequera Málaga	34	95160390	95160395	info@cadelmar.es	www.cadelmar.es
CALADERO	Carretera Nacional 232. Km. 271,200	E-50690	Pedrola- Zaragoza	34	976616700	976616701	caladero@caladero.com	www.caladero.com
CAVIAR INVESTMENT S.L.	Paseo de Gracia, 76	08008	Barcelona	34	932721092	932721093	caviar@caviarinvestment.com	www.caviarinvestment.com
COMPESCA S.A.	Joaquin Salas, 6	39011	Santander	34	942354422	942354423	jaimeyllera@compesca.com	www.compesca.com

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CONGEFISH IMPORT SA	Longitudinal 6, Edif. Frimercat of 37	08040	Mercabarna/Barcelona	34	932627102	932627103	info@congefish.com	www.congefish.com
CONGELADOS MARAVILLA S.A.	Puerto Pesquero de Vigo, darsena 4Nv Mer	36202	Vigo Pontevedra	34	986223250	986220744	info@congeladosmaravilla.com	www.congeladosmaravilla.com
EAST COAST EUROPA	c/ Castrobaroto, 10, 2a. Aeropuerto	28042	Barajas - Madrid	34	916560596	916561586	patxi.larraz@gmail.com	www.eastcoastseafood.es
ERIS-MAR (PALAMOS MAR S.L.)	P.A.E.C. C/Verema, parcela 6, nave 2	17251	Calonge -Girona	34	972661755	972661755	info@erismar.com	www.erismar.com
EUROCAVIAR S.A.	Triana 51	28016	Madrid	34	913456400	913508392	jgarcia@euro-caviar.com	www.euro-caviar.com
FISH-KINGS SL	L.G. San Antoniño nº 22 Darbo	36949	Cangas (Pontevedra)	34	986392081	986392081	fish-kings@fish-kings.com	www.fish-kings.com
FRES VALDES S.A./PESQ.-LONJA DE ALT.	Almacen 34	36202	Vigo, Pontevedra	34	986209565	986208511	fresv@fresvaldes.com	www.fresvaldes.com
FRESCAMAR ALIMENTACION S.L.	Paruqe Empres. Carabona C/ Zinc 4	12530	Burriana	34	964587068	964586321	info@andromedagroup.es	www.frescamar.es
FRIGORIFICOS FANDIÑO S.A.	Avda Garcia Barbon62, bloque 1 off. inte	36201	Aviles Asturias	34	986447384	986438106	vigo@fandino.info	www.fandino.es
GRUPO UNION MARTIN	Muelle de Ribera s/n Frig. Ojeda 2ª Plta	35008	Las Palmas	34	928475251	928475243	umartin@unionmartin.com	www.unionmartin.com
INLET SEAFISH	Carrera d'En Corts, 231, Fr. Euromerk	46013	Mercavalencia, Valencia	34	963240580	963564577	info@inlet.es	www.inlet.es
INTER-TRADING S.L. SPAIN	C/Alonso de Bazán nº8	29602	Marbella (Málaga)	34	951703518	952813571	charles_netmar@yahoo.es	www.netmarseafood.com
LA BACALADERA	Poligono Industrial Txumarra Eskortza	20305	Irun /Gipuzkoa	34	943639033	943630670	info@bacaladera.com	www.bacaladera.com
MAR IMPORT VENTA	Lonja de Altura - Almacen Nº 43	36202	Puerto pesquero/ Vigo	34	986822610	986822784	fish@marimport.net	www.marimport.net
MERKA-OIARTZUN	Poligono Aranguren, ap. 180	20180	Oiartzun	34	943490500	943493454	merka@merkaoiartzun.com	www.merkaoiartzun.com
PESCADOS RUBEN	Fondo Nois, 1 Nois Foz	27893	Foz Lugo	34	982136733	982136659	export@pescadosruben.com	www.pescadosruben.com
PESCIRO S.L.	Tinglado General Empaque P1a of.3	36202	Vigo	34	986436625	986453553	pesciro@pesciro.com	www.pesciro.com

SWEDEN

PISCARIUS AB	Stora Ävägen 21	436 34	Askim/Gothenburg	46	317232171	317232172	ted@piscarius.se	www.piscarius.se
SEJRBO & SON AB	Dymöllan	26492	Klippan	46	43515201	43518400	sejrbo-sonab@swipnet.se	www.sejrbo.com

SWITZERLAND

ALIMER	56 route de Satigny	1242	Satigny	41	227855303	227855306	alimer@alimer.ch	www.alimer.ch
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CASIC	Münchensteinerstr. 83	4002	Basel	41	613354500	613354590	j.reyes@casic.ch	
CIDIAL S.A.	Rue Blavignac 5	1227	Genève	41	223491300	223491350	cidial@cidial.ch	www.cidial.ch
COREMA FROZEN SEA FOODS S.A.	Chemin des Chalets 5	1279	Chavannes-de-Bogis	41	229607040	227767920	info@corema.ch	www.corema.ch
DYHRBERG AG	Lachsräucherei	4710	Klus/Balsthal	41	623868000	623868019	admin@dyhrberg.ch	www.dyhrberg.ch
GERIG, GUSTAV AND CO.	Hardturmstr. 169	8037	Zürich	41	444443333	444443300	contact@gerig.ch	www.gerig.ch
MARINEX S.A.	Seefeldquai 1	6318	Walchwil	41	417598333	417598330	marinex@marinex.ch	www.marinex.ch
MIGROS FEDERATION MARKETING FISH	Limmatstr. 152	8005	Zürich	41	442772432	442772419	media@migros.ch	www.migros.ch
SEINET & CO.	Gibraltarstr. 1/Postfach	6000	Lucerne 7	41	412494444	412494449	mail@seinet.ch	www.seinet.ch
STADEL, FISCHIMPORT AG	Lachmattstrasse 1	4133	Pratteln 2	41	612279800	612279820	stadel@stadel.ch	www.stadel.ch

TURKEY

ANTALYA BALIK A.S.	Organize Sanayi Bölgesi 2. Etap 24cd	07190	Antalya	90	2422581920	2422581951	zeynep@antalyabalik.com.tr	www.antalyabalik.com
KILIC SEAFOOD AQUACULTURE CO.	Kemikler Köyü Mevkii	48200	Mevkli Milas-Mugla	90	2525590283	2525590299	sales@kilicsea.com	www.kilicdeniz.com.tr

UKRAINE

CONRIL	48a Vladimirskaia	01034	Kiev	380	444941995	442794912	ceo@coril.kiev.ua	www.conril.kiev.ua
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UNITED KINGDOM

BLOOMSBURY INTERNATIONAL LTD	The Old Granary Aylesby Near Grimsby	DN377AW	NE Lincolnshire	44	1472875750	147287551	enquiries@bilgrimsby.co.uk	www.britishseafood.com
FLYING SEAFOOD UK	25 Parkhurst Road	SG14 3AZ	Bengeo, Hertford	44	7702780804		don@flyingseafood.dk	www.flyingseafood.com
GATE HOUSE FARM	Stockland Lane, Hadlow Down	TN22 4EA	Nr Uckfield, East Sussex	44	01732873755	01732845541	weardalefishfarm@btconnect.com	www.weardalefishfarms.co.uk
IBCO LIMITED	Lord North Street	M408 AD	Manchester, M408AD	44	1612028200	1612028201	sales@ibco.co.uk	www.ibco.co.uk
MARDON PLC	Fenton Street, 10	LA 1TE	Lansaster	44	1524845000	1524845111	mardon@mardon.com	www.mardon.com
NEWNES, C J & PARTNERS	77 Billingsgate Market	E14 5TQ	London	44	2075150793	2075384614	bevansfish@aol.com	
NORTRADE	Cranbrook Road, Gills Green	TN18 5HB	Hawkhurst	44	1580752878	1580752770	sales@nortrade.co.uk	www.auscot.co.uk
RAGA FOODS LIMITED	Unit 3, Northolt, Belvue Road	UB5 5QS	Notholt, Middlesex	44	02088390890	02088390891	ganesh@ragafoods.com	www.ragafoods.com

<i>COMPANY</i>	<i>STREET</i>	<i>ZIP</i>	<i>TOWN</i>	<i>CODE</i>	<i>TEL.</i>	<i>FAX</i>	<i>E-MAIL</i>	<i>WEB SITE</i>
RUSKIM SEAFOODS LTD.	Marine House, Stafford Pk 15	TF3 3BB	Telford - Shropshire	44	1952293344	1952293345		www.ruskim.co.uk
SEAMARK PLC	Seamark House, Edge Lane	M43 6BB	Droylsden, Manchester	44	1613555000	1613555001	sales@seamark.co.uk	www.seamark.co.uk
TESCO STORES LIMITED	Baird Avenue	DD1 9NF	Dundee	44	08457225533			www.tesco.com
UHRENHOLT LTD	50 Acorn Walk	SE16 5EP	London	44	7894686737	2076574247		www.uhrenholt.com
WEARDALE FISH FARMS LTD	East Malling Enterprise Centre	ME19 6BJ	New Road - East Malling - Kent	44	01732873755	01732845541	weardalefishfarm@btconnect.com	www.weardalefishfarms.co.uk
YOUNG'S	Ross House - Wickham Road	DN31 3SW	Grimsby - North East Lincolnshire	44	1472585858	1472585586		www.youngsseafood.co.uk

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