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### Fishery Products

### Annual

### 2007

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**Report Highlights:**

In 2008, China's aquatic production is forecast at 56.2 MMT, up from the estimated 54.7 MMT in 2007. Production growth is mainly driven by strong domestic consumption due to greater disposable income growth and export-oriented aquatic processing. Aquatic trade value is forecast to increase from the estimated \$9 billion for export and \$3.6 billion for import in 2007 with trade surplus approaching \$6 billion. China is the largest importer of U.S. seafood products, while the United States is the second largest buyer of China's aquatic products. The new U.S.-China Agreement on Food and Feed Safety is expected to enhance the safety of China's aquatic product exports to the United States and facilitate trade in 2008 and beyond.

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## Executive Summary

China's 2008 aquatic production is forecast to reach 56.2 MMT, up three percent from an estimated 54.7 MMT in 2007. Much of this production growth is due to the continued expansion of aquaculture which accounted for 68 percent of total aquatic production during 2006. China's aquatic production increase is linked both to a strong export market as well as its growing domestic demand. China's rapid economic growth has provided its consumers increased disposable incomes, thereby encouraging greater aquatic product consumption. The expansion of the aquaculture area in both coastal seawater and fresh water contributed greatly to the aquatic production growth while the aquatic catch production remains stable to declining in the coming years. Yield increases triggered by technological advances also boosted production. Concurrently, the aquatic processing sector, which is mainly export-driven, is also expected to expand further in the coming years.

Aquatic trade is forecast to grow in 2008 with China's trade surplus expected to hit \$6 billion as a result of the dynamic processing trade and export-oriented aquaculture. China is currently the largest recipient of U.S. seafood exports, while the United States is the second largest recipient of China's processed aquatic exports. Aquatic trade between China and the United States is forecast to grow in 2008 with "Fish/Frozen" (HS Code 0303) continuing to be the major category imported from the United States while the export mix to the United States is diversified and valued-added. The U.S.-China Agreement on Food and Feed Safety signed in December 2007 is expected to enhance the safety of Chinese aquatic product exports to the United States and facilitate smooth trade in 2008 and beyond.

Sustained high GDP and disposable income growth rates will boost domestic consumption of aquatic products in 2008. However, aquatic imports for domestic consumption are growing at a rather slow pace. Nevertheless, high quality natural aquatic products from the United States are expected to steadily increase in volume and value.

Definition of terms: Aquatic products are both defined as cultured (farmed) and wild caught aquatic products; Aquatic products include fish, shrimp/prawn/crab, shellfish, algae and other; Aquatic catch production is total volume of both fresh and sea water caught wild aquatic products; Aquatic culture production is the total volume of both fresh and seawater cultured (farmed) aquatic products. This report will use Chinese terminology to maintain consistency between Chinese statistics and product categories.

## Production

### **Aquatic production is forecast to reach 56 MMT in 2008**

China's aquatic production for 2008 is forecast to reach 56.2 MMT, up by three percent from the estimated 54.7 MMT in 2007. China remains the world's largest aquaculture producer. The rise in aquatic production is attributable to the country's rapid economic growth, rising disposable incomes and greater consumption of aquatic products, together with strong growth of aquatic exports. While official data is not yet available, the 2007 aquatic production is estimated to increase by three percent over the 52.9 MMT in 2006. According to China's Ministry of Agriculture (MOA), aquatic production for the first three quarters of 2007 reached 32.6 MMT, up more than four percent over the previous year to date figure. Out of total production, freshwater aquatic production reached 14.8 MMT, up six percent, sea catch production stood at 9.4 MMT, down one percent, and sea culture production was 8.4 MMT, up six percent as compared to the previous year. Industry sources also show that total aquatic production in 2007 is likely to rise by three percent over the previous year. According to MOA's 11<sup>th</sup> Five-Year (2006-2010) Plan for the Fishery Industry (11<sup>th</sup> Five-Year Fishery Plan), aquatic production is expected to grow by more than three percent annually, reaching 60 MMT by 2010.

China's continued aquatic production increase is driven by aquaculture expansion which is estimated to account for 68 percent of total aquatic production in 2006. According to MOA, the yearly aquatic production growth rate during the 10<sup>th</sup> five-year period (2001-2005) averaged four percent. During this same period, the annual aquaculture production growth rate, however, grew at more than six percent. Aquatic catch production remained stagnant from 16.9 MMT in 2004 to 17.1 MMT for 2005. Such marginal growth is attributable to the increased freshwater fish catch of 130,000 MT. In 2006, however, both seawater and freshwater catch declined with a combined catch production of 16.9 MMT. Such a trend is likely to continue both domestically and worldwide in the foreseeable future and will be limited by declining wild fishery resources. In contrast, aquaculture production will be driven by the further exploitation of water resources along with higher yields.

Freshwater and seawater culture production both increased in 2006, up seven percent and two percent over the previous year, respectively. MOA reported that in the first nine months of 2007, freshwater aquatic production reached 14.8 MMT, up six percent; and seawater culture production was 8.4 MMT, up six percent as compared to the previous year. This growth contributed to the total aquatic production growth.

**Table 1 China's aquatic production (Unit: Metric Ton)**

Category	2003	2004	2005	2006	2007*
Total Aquatic Production	47,061,064	49,017,671	51,016,530	52,904,031	54,700,000
-Seawater Aquatic Production	26,856,182	27,677,907	28,380,831	28,876,758	29,500,000
--Seawater Catch	14,323,121	14,510,858	14,532,984	14,420,359	14,400,000
--Seawater Culture	12,533,000	13,167,049	13,847,847	14,456,399	15,100,000
-Freshwater Aquatic Production	21,339,764	22,635,699	22,635,699	24,027,273	25,200,000
--Freshwater Catch	2,419,792	2,551,045	2,551,045	2,544,168	2,500,000
--Freshwater Culture	18,919,972	20,084,654	20,084,654	21,483,105	22,700,000

Source: Ministry of Agriculture 2006 China Agriculture Statistics Report; 2007\* Estimated by FAS/Beijing

Cultured fish production stood at 20.2 MMT in 2006, up seven percent from the 18.9 MMT in 2005. It remains the largest category, accounting for 56 percent of the total cultured production, followed by shellfish and crustaceans at 32 and seven percent, respectively. Freshwater cultured fish reached 19.5 MMT, accounting for 97 percent of the total cultured fish production. Carp is the most popular cultured freshwater fish with a total production at 15.1 MMT in 2006, accounting for 77 percent of total freshwater cultured fish production. Tilapia production grew rapidly to more than 1.1 MMT in 2006, up 14 percent over 2005's 978,135 MT. Industry sources reported that Tilapia production is likely to increase in the near future in response to strong demand for China's tilapia in the United States. Catfish production continued to grow rapidly in 2006 to be 170,766 MT, as compared to the 101,096 MT in 2005, up 69 percent. Its production is likely to exceed 200,000 MT in 2007 and continue growing in 2008. Shellfish is the largest group of sea-cultured species with 2006 production reaching more than 11.1 MMT, and accounting for 77 percent of total sea cultured production. Cultured crustacean production in 2006 was 2.4 MMT from the 2.1 MMT in 2005, up 14 percent. In all, freshwater production represented 60 percent of the total cultured crustacean production in 2006.

**Table 2 China's seawater and freshwater aquatic production by category (Volume: Metric Ton)**

Category	2003	2004	2005	2006	2007*
Seawater Fish Production	10,250,563	10,172,677	10,388,209	10,373,719	10,400,000
Seawater Shrimp, Prawn, and Crab	2,980,610	3,124,022	3,240,594	3,408,520	NA
Seawater Shellfish	10,659,370	11,094,019	11,560,628	12,039,765	NA
Seawater Algae	1,413,128	1,505,216	1,541,754	1,534,626	NA
Seawater Other	1,552,511	1,781,973	1,649,646	1,520,128	NA
Freshwater Fish	17,941,904	18,934,217	20,093,959	21,246,597	22,200,000
Freshwater Shrimp, Prawn, and Crab	1,389,270	1,533,884	1,637,505	1,833,841	1,90,000
Freshwater Shellfish	537,496	534,581	539,629	570,396	NA
Freshwater Algae	6,055	4,666	6,028	8,102	NA
Freshwater Other	332,416	330,157	358,578	368,337	NA

Source: Ministry of Agriculture 2006 China Agriculture Statistics Report; 2007\* Estimated by FAS/Beijing

In 2006, Shandong, Guangdong, and Fujian provinces continued to be the three largest aquatic product producers mainly because of their large sea cultured production. Hubei, Guangdong and Jiangsu provinces rank as the top three in terms of freshwater production.

**Table 3 China's aquatic production by provinces in 2006 (Volume: Metric Ton)**

	Total production	Sea production	Freshwater production
<b>Total</b>	52,904,031	28,876,758	24,027,273
Shandong	7,459,120	6,309,106	1,150,014
Guangdong	7,239,648	4,105,176	3,134,472
Fujian	6,000,309	5,288,478	711,831
Zhejiang	4,853,411	4,005,231	848,180
Liaoning	4,398,404	3,705,615	692,789
Jiangsu	4,050,447	1,190,755	2,859,692
Hubei	3,313,870	0	3,313,870
Guangxi	2,964,282	1,769,508	1,194,774
Other	12,624,540	2,502,889	10,121,651

Source: Ministry of Agriculture 2006 China Agriculture Statistics Report

Freshwater aquaculture exists nationwide, particularly for carp. However, some species' production is limited to certain regions due to available resources and climate conditions. For instance, tilapia production by three provinces Guangdong, Guangxi, and Hainan in 2006 continued to dominate, accounting for 81 percent of the total, as compared to the 77 percent in 2005. Catfish production, on the other hand, is located primarily in Hubei, Sichuan, and Jiangsu, collectively produced 56 percent of the national total. Shrimp and prawn culture are conducted both in fresh and seawater with the largest producers in Guangdong, Jiangsu, Guangxi, Zhejiang, and Hainan provinces. Guangdong continued to be the largest shrimp producer with *Penaeus vannamei* production at 376,770 MT in 2006. Eel production is concentrated in Fujian, Guangdong, and Jiangxi provinces with much of it destined to the Japanese market. The combined cultured shellfish production of Shandong, Fujian, Guangdong, and Liaoning provinces accounted for 80 percent of the 2006 total.

#### **Aquatic catch production remains stable**

The total 2008 catch production is forecast similarly to 2007's estimated 16.9 MMT. According to MOA, annual seawater catch between 2002 and 2005 averaged approximately 14.5 MMT and accounted for 85 percent of the total catch. Freshwater catch production

remained small at about 2.5 MMT in the past few years. Industry sources report that total catch is unlikely to increase significantly in the foreseeable future due to limited freshwater and seawater natural resources. Though seawater catch data for other territorial seas is not officially released, most industry insiders believe it is difficult to increase production significantly.

#### Aquaculture farmed area expansion continues

The total aquaculture area continued expanding in 2006, reaching 7.8 MHA, up more than three percent over 2005. The combined freshwater and seawater areas increased by 247,000 HA, with 168,000 HA for freshwater and 80,000 HA for seawater respectively between 2005 and 2006. Liaoning, Hebei, Guangdong, Guangxi, and Shann'xi provinces collectively added 132,520 HA of culture area in 2006, mainly expanding in seawaters together with freshwater lakes/reservoirs. Seawater culture area is likely to grow moderately in the coming years. Freshwater culture area is also expected to increase because some reservoirs/lakes are not fully utilized for aquaculture purposes due to growth constraints such as lack of transportation and technical service. However, MOA indicated that limited water resources and environmental concerns pose new challenges to aquaculture area expansion and additional production gains shall be achieved through technology dissemination and innovation.

**Table 4 China's Aquaculture Area Resources (Unit: Hectares)**

Year	Total	Freshwater	Seawater
2007*	7,940,000	6,150,000	1,790,000
2006	7,792,501	6,018,382	1,774,119
2005	7,545,019	5,850,488	1,694,531
2004	7,281,252	5,663,800	1,617,452
2001	6,648,760	5,362,302	1,286,458

Source: Ministry of Agriculture 2006 China Agriculture Statistics Report; 2007\* Estimated by FAS/Beijing

**Table 5 China's Seawater Aquaculture Area Resources in 2006 (Unit: Hectares)**

Area	Total	Fish	Shrimp/ Prawn	Crab	Shellfish	Algae	Other
Total	1,774,119	87,314	247,359	82,868	1,127,285	94,225	135,068
Tianjin	5,511	833	4,304	374	0	0	0
Hebei	102,302	7,809	23,591	1,545	67,460	0	1,897
Liaoning	485,800	3,539	25,295	1,015	368,815	12,449	74,687
Shanghai	80	0	80	0	0	0	0
Jiangsu	180,680	4,631	10,537	12,654	137,016	14,506	1,336
Zhejiang	109,055	6,247	14,344	21,066	57,610	9,045	743
Fujian	152,298	12,157	16,544	8,668	84,223	30,430	276
Shandong	420,258	8,826	61,567	20,084	262,294	22,562	44,925
Guangdong	234,635	39,774	58,743	14,533	111,205	3,091	7,289
Guangxi	64,336	1,834	20,397	1,594	36,669	34	3,808
Hainan	19,164	1,664	11,957	1,335	1,993	2,108	107

Source: Ministry of Agriculture 2006 China Agriculture Statistics Report

**Table 6 China's Inland Fish Breeding Area Resources (1999-2007; Unit: Hectares)**

	Total	Pond	Lake	Reservoir	Stream	Others
2007*	6,150,000	NA	NA	NA	NA	NA
2006	6,018,382	2,531,048	978,244	1,909,580	391,766	207,744
2005	5,850,488	2,495,361	964,088	1,808,027	381,533	201,479

2004	5,663,800	2,429,479	939,667	1,689,623	377,432	227,599
2000	5,277,732	2,219,976	894,861	1,620,978	378,097	163,820
Source: Ministry of Agriculture 2006 China Agriculture Statistics Report; 2007* Estimated by FAS/Beijing						

### Aquaculture production faces new challenges

Despite the fast growth of the aquaculture sector, the industry's expansion has mainly relied on increasing the production capacity and farming area. According to MOA the new challenges facing aquaculture production include: low technical innovation by the industry; genetically improved aquatic species accounting for only 16 percent of cultured species (far below the norm for crops and domestic animals); the occurrence rate of aquatic diseases increased in recent years; the lack of specialized aquatic vaccines and drugs resulted in the use of inadequate drugs; feeding natural fish/shrimp (instead of industrialized feed) in seawater culture resulted in waste of resource; and water utilization efficiency remains low (because more than 80 percent of the industrialized aquatic farms adopt the "all in, all out" method of water exchange). Of all challenges listed above, the most serious one is the use of unapproved drugs/chemicals in aquaculture (including nitrofurans, malachite green, gentian violet, and flouroquinolones). To ensure the quality of aquatic products, particularly goods for export, MOA and China's Administration for Quality Supervision, Inspection and Quarantine (AQSIQ) adopted a licensing system for export-oriented farms and processing establishments. MOA and AQSIQ conduct frequent field audits of export-oriented aquaculture farms. Aquatic products for export are subject to mandatory inspection and must be accompanied by AQSIQ inspection certificates.

### Aquatic processing is mainly driven by exports

According to MOA, the total number of aquatic processing facilities continued to increase in 2006, reaching 9,549, up by 421 over 2005. Processing capacity also rose to 18 MMT from the 17 MMT in 2006. The number of cold storages facilities increased to 6,552, up 224 over 2005. The total aquatic products processed in 2006 reached 16.3 MMT as compared to the 15.5 MMT in the previous year. This accounted for about 30 percent of the total aquatic production in 2006, slightly higher than in 2005. Total processed aquatic product volume stood at 13.3 MMT, of which 8.2 MMT was frozen or frozen processed goods. Industry sources indicate that this situation reflects the domestic consumer's enduring preference for live aquatic products. Processing capacity expansion is therefore mainly driven by export market demand which led to the construction of new production facilities.

The dynamic processing trade also spurred greater investment. Industry sources estimate that the processing trade accounts for more than 38 percent of China's aquatic product export value and is expected to steadily increase. Processed aquatic products using domestic raw material (mostly cultured products) is also mainly export driven. Domestic consumption of processed aquatic products remains relatively small compared to the total aquatic consumption. Although some consumers in large cities have begun purchasing processed aquatic products, most Chinese consumers still prefer live or fresh aquatic goods. Despite complaints of foreign trade barriers on Chinese aquatic products, MOA acknowledged that the barriers also forced the sector to invest more in producing value-added, quality products.

Aquatic processing bases are set up within or near major aquatic production regions. Out of the total 9,549 processing facilities, 6,657 (or 70 percent) concentrate in Zhejiang, Shandong, Fujian, and Guangdong provinces. These provinces are also major aquaculture producers and are equipped with port and cold storage facilities. Many foreign traders have also entered the processing trade industry in these provinces.

## Consumption

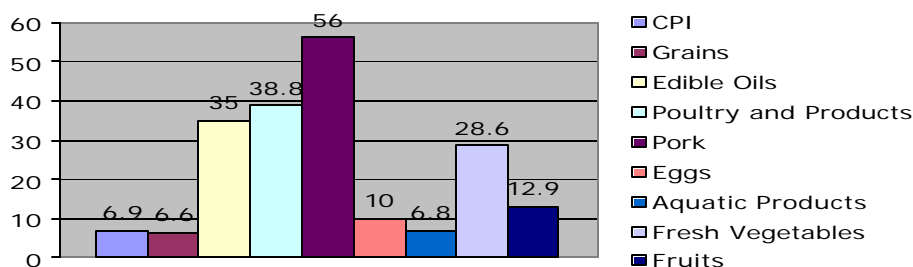
China's per capita aquatic product consumption is forecast to continue increasing in 2008. Based on National Statistics Bureau (NSB) information, per capita consumption for urban dwellers in 2006 was 13 kg, up slightly from 12.6 kg in the previous year, while for rural people it was 5 kg, up 0.1kg. In 2007, consumption of aquatic products is expected to increase as a result of the continued income growth for consumers and higher price for pork and other meat products in 2007. Urban per capita aquatic product consumption exceeded 13 Kg in 2002 and 2003, but fell in 2004 mainly due to higher prices (CH6098). Industry insiders believe per capita consumption will continue to increase steadily with the growth potential for the rural population larger than that of the urban because of the current rural consumption is relatively low.

**Table 7 Per Capita Consumption Trends for Aquatic and animal products**

Per Capita Consumption Trends for Aquatic Products						
	2002	2003	2004	2005*	2006**	2007***
Urban	13.2	13.4	12.5	12.6	13	13.2
Rural	4.4	4.7	4.5	4.9	5	5.1
Per Capita Consumption Trends for Pork, Beef, and Lamb						
Urban	23.3	23.7	22.9	23.9	23.8	23.8
Rural	14.5	15	14.8	17.1	17	17.2
* Urban population of 561.57 million. Rural Population of 744.71 million. ** Urban population of 577.06 million. Rural Population of 737.42 million *** Estimated by FAS/Beijing						
Source: 2006 China Statistical Yearbook Table 10/9 and 10/29						

MOA statistics show that average wholesale price for aquatic products in the first three quarters of 2007 increased by more than three percent from the previous year. While prices for egg and poultry products increased by 26 and 29 percent respectively; pork prices continued growing in the first few months and soared to record high in August 2007—up 86 percent compared to the same period in 2006. According to NSB, China's CPI in November 2007 increased almost seven percent with prices for pork, poultry and products up 56 and 39 percent respectively, compared to the same month in 2006. The price for aquatic products, however, only increased by less than seven percent. The stable to slightly increasing price for aquatic products implies that supply and demand are growing simultaneously. Many industry sources expect aquatic consumption by both urban and rural residents to grow in 2007 and continue in 2008. Based on MOA's 11<sup>th</sup> five-year plan, the nationwide per capita aquatic product consumption is expected to reach 12 Kg by 2010.

**China's CPI and Prices for Major Consumption Goods in November 2007**



Note: Growth Rate (%) in November 2007 VS November 2006



The per capita consumption of aquatic products in coastal provinces is higher than in other regions. Apart from obvious geographic differences, coastal city residents' high level of disposable income influences consumption patterns as well. Table 8 lists the top ten provinces and municipalities with the highest expenditures on aquatic products in 2006. This ranking is virtually unchanged from 2005. Clearly, they are either located in coastal regions or rank high in disposal income. Consumption is also related to dietary tradition as people in western provinces prefer other types of animal protein. Most Chinese consumers are still price sensitive when purchasing aquatic products. Freshwater cultured products such as carp and shrimp/prawn are popular for consumption at home and restaurants due to the affordable price and freshness. Seawater products, including yellow croaker and ribbonfish continue to be favorites to most people in North China. Processed shellfish/shrimps/prawns and tilapia fillet are also increasingly popular among consumers in large cities. High quality imported seafood such as lobster, geoducks, salmon, and crab, however, are widely used by hotels and restaurants for high-end consumers. Along with the growing middle-class in large cities and coastal regions with booming economies, the potential for these products remains promising as Chinese families opt for a more diversified diet.

A typical example is the increased strong salmon imports since 2005. Salmon imports continued to be high valued at \$244 million in the first ten months of 2007. Although salmon processing trade increased rapidly (the volume of re-exported processed salmon is not available), industry insiders believe a large share of salmon imports are for domestic consumption. Fresh or chilled salmon meat is served in many restaurants and hypermarkets in larger cities. The United States continued to be the largest supplier in volume and value in the first ten months of 2007.

**Table 8 Per Capita Annual Aquatic Expenditure of Urban Resident by Region in 2006**

Region	Aquatic Product Expenditure Rank	Aquatic Product Expenditure RMB Yuan	Disposable Income Rank	Disposable Income RMB Yuan
Fujian	1	670	7	13,753
Shanghai	2	595	1	20,668
Zhejiang	3	552	3	18,265
Hainan	4	434	21	9,395
Guangdong	5	414	4	16,016
Tianjin	6	293	5	14,283
Jiangsu	7	286	7	14,084
Liaoning	8	256	11	10,370
Guangxi	9	237	16	9,899
Beijing	10	183	2	19,977
Nation Average	NA	203	NA	11,759

Source: 2006 China Statistical Yearbook Table 10/15,10/16 \$1=RMB7.6 Yuan

Because Chinese consumers prefer live products to fresh and frozen products, most restaurants keep fish tanks that allow customers to choose their own fish, shrimp, lobster, crab, and other aquatic products when dining out. Most wet markets and some supermarkets also allow consumers to purchase live aquatic products. This tradition appears to be changing due to the increasingly fast-paced life of cities, as many families prefer ready-to-cook aquatic products to save time. Processed products, including processed fish, shellfish, mollusks, and shrimps/prawns, are therefore becoming increasingly popular in hypermarkets in large cities.

## Trade

### **Aquatic product trade is expected to continue growing in 2008**

China's aquatic trade value and volume are expected to continue growing but at a moderate level in 2008. Total aquatic trade value for 2007 is estimated at \$12.6 billion with imports valued at \$3.6 billion and exports at \$9 billion, up seven, thirteen and five percent respectively over the previous year. The trade surplus is expected to hit \$5.4 billion, almost unchanged from 2006. Aquatic exports continued to be the largest category in all-agriculture exports. Increased prices for aquatic resources in the global market also attributed to growth of total trade value. According to the World Trade Atlas (WTA), aquatic export volume increased by less than three percent in the first ten months of 2007, down significantly from the 17 percent in 2006. Industry sources explained that the reduced growth was attributable to the import control imposed by the United States since June 2007, followed by strict inspection on Chinese aquatic exports by other major importing countries. Meanwhile, China's export quality control agency, AQSIQ also implemented tight inspection/control measures since June, resulting in lower exports.

### **Processing trade continues to boost imports**

Aquatic imports are forecast to continue growing in 2008 from the estimated 2.4 MMT imports in 2007, up by nine percent over 2006. However, growth rate did slow in comparison to the 13 percent in 2006. The 2007 imports are valued at an estimated \$3.6 billion, up 13 percent over the previous year. There is no official data on the share of aquatic imports destined for processing trade (re-export after processing). Industry insiders believe that out of the total aquatic export value, the export value of processing trade accounts for 40 percent, while the export value of domestic aquatic products (used domestically produced raw material) stands at 60 percent. Imports for domestic consumption are also growing but at a rather slow pace. It is likely that aquatic imports will continue to grow in 2008, partially to supply the growing processing trade. Government policy continues to favor the expansion of the processing industry which can absorb much of the growing labor force. Total aquatic import volume in the first ten months of 2007 reached 19.5 MMT as compared to the 17.7 MMT in the same period in 2006. According to WTA, in the first ten months of 2007, imports by category are characterized by the rapid increase of mollusks and other (HS 0307) and frozen fish (HS 0303), up 21 and 9 percent in volume respectively; frozen fish and Mollusks imports accounted for 75 and 11 percent of the total imported value respectively. Large imports are likely destined for re-export with a strong combined export volume of fish/fillet (HS 0304) and prepared or packaged fish (HS 1604), at more than 1.1 MMT, accounting for 51 percent of the total.

Based on WTA, salmon imports also increased slightly in the first ten months of 2007 with a total import value reaching \$244 million and volume of 117,311 MT, up two percent and one percent respectively, from the same period in the previous year. Japan, Russia, and the United States continue to be the three largest suppliers in 2007. Industry sources indicate most processed salmon enters China in the category of processing trade.

Russia is expected to continue to top the list of origins of China's aquatic product imports, which it has headed for the past consecutive seven years, distantly followed by the United States and Japan. Total imports from Russia are estimated to exceed \$1.3 billion in 2007, up 11 percent from the previous year. These account for 38 percent of China's total 2007 aquatic imports.

Imports from the United States continued growing during the first ten months of 2007. The import value totaled \$429 million and is expected to exceed \$450 million for the whole year, up 10 percent from 2006. The United States has been the second largest supplier since

2004. In the first ten months of 2007, frozen fish remained the largest category, accounting for 88 percent of the total import value. Imports by species include plaice (\$123 million out of the total \$127 million for all flatfish) followed by salmon (\$113 million), cod (\$58 million), and mollusks (\$30 million). It is worth noting that salmon imports from the United States are expected to soar to \$125 million in 2007, up 60 percent from the previous year. Excluding the export-oriented processing trade, strong salmon imports are also driven by domestic demand. It is difficult to quantify the volume of salmon imported for domestic consumption, but salmon is increasingly popular among middle class consumers at home or dining out in Japanese restaurants or hotels in large cities including Beijing, Shanghai, Guangzhou, etc. Industry insiders believe China will become one of the world's largest salmon markets in the near future. Despite improved cold storage in hypermarkets in large cities, the cold chain needs to be improved in order to shorten the delivery time to reach end-users. China's demands for other high quality and natural seafood are also expected to grow steadily along with income growth and improved health awareness.

Qingdao and Dalian continue to be the two largest arrival ports for aquatic products, accounting for 85 percent of the total imports. Well-established facilities, including processing factories in Qingdao and Dalian, will likely solidify the two cities' status as the largest seafood import hubs in China in the foreseeable future.

#### **Fishmeal imports are forecast at 1 MMT in 2008**

Fishmeal imports in 2008 are forecast to pick up slightly to 1 MMT from the estimated 930,000 MT imports in 2007. This is much lower than the 1.58 MMT imported in 2005. In May 2006, fishmeal prices skyrocketed to more than \$1,300 from \$850 per metric ton in March. High prices continued through late July before falling to \$1,000 per metric ton and fluctuated at this level through May 2007. As a result, consumption dropped to less than 1 MMT in 2006 and is expected to be approximately 1 MMT in 2007. Feed industry sources reported that other protein meals were added as substitutes in order to reduce costs. Fishmeal use was also reduced in part by the weak animal husbandry since late 2006. Domestic fishmeal production stands at about 300,000 MT per year with ending stocks for 2007 expected to be small. The current fishmeal price ranges from \$850 to \$950 per metric ton. Imports for 2008 are likely to pick up moderately given the demand by large-scale animal and aquaculture industries, though price and fishmeal availability may restrict imports. Peru remains the largest fishmeal supplier. Imports from the United States for 2007 and 2008 are expected to be similar to past years at approximately 70,000 MT.

#### **Value-added aquatic product exports continue to increase**

China's exports of aquatic products for 2007 are expected to reach \$9 billion, up five percent from the \$8.6 billion in the previous year. This growth rate is notably lower than the 14 percent realized in the previous two years. According to WTA, in the first ten months of 2007, the total aquatic export value was \$7.1 billion, up five percent as compared to the previous year, despite high growth of 23 percent for prepared or packaged fish and caviar, the prepared crustaceans and mollusks have seen no growth, while fish/fillet increased by seven percent as compared to the same period in last year.

According to WTA, as of the end of October 2007, three major categories, namely Fish/Fillet (HS Code 0304), Prepared or Packaged Crustaceans and Mollusks (HS Code 1605), and Prepared or Packaged Fish and Caviar (HS Code 1604), continue to dominate the export market, accounting for 79 percent of the total export value, up from the 76 percent. The 23 percent growth rate for prepared or packaged fish and caviar export value (\$1.8 billion), compared to the seven percent growth for fish fillet reflect that by adding more value to fish products increasingly enhance the industry. This trend is likely to continue in aquatic processing in the future and will be made possible through the advancement in technology and management, as businesses strive to meet changes of consumers worldwide. The

unchanged export value for prepared and preserved crustacean and mollusks is mainly attributed to the small exports of shrimps and prawns to the United States.

Exports of cultured species showed a different picture in the first ten months of 2007. Shrimp and prawn exports dropped by four percent, mainly due to a sharp fall of exports to the United States which plummeted to \$136 million from the \$243 million for the first ten months in 2006. The combined exports to other Asia and Pacific destinations, including South Korea, Malaysia, Australia, and Taiwan, remained strong at \$232 million, a 26 percent increase over the first ten months in 2006. Exports to Japan continued smooth growth in 2007 making Japan again the number one export destination with exception of 2006 when the United States surpassed Japan as the largest destination. Industry sources say the impact of Japanese "Positive List System," enacted in May 2006, remains limited. Shrimp and prawn exports are forecast to maintain steady growth and destinations are likely more diversified in 2008. Reduced export prices in 2007 also attributed in part to the reduced export value. According to WTA, the average export price in the first ten months of 2007 was \$25 per metric ton, lower than that of the previous year. Prepared and packaged shrimp and prawn continue to dominate, accounting for 82 percent of total shrimp and prawn exports in 2007. This trend will maintain in 2008 supported by strong consumer demand and China's commitment to adopting its production practice to meet the market trend.

In the first ten months of 2007, tilapia exports soared to \$385 million, exceeding the \$369 million in the full year of 2006. The bulk of this growth came from increased exports of prepared and preserved tilapia which skyrocketed to 153,887 MT, up 694 percent over the whole year of 2006. The export value of prepared and preserved tilapia accounted for 94 percent of the exports of all tilapia products. However, tilapia fillet exports declined sharply with total export value at \$10 million merely from the \$85 million in the previous year. Frozen tilapia also dropped notably to \$15 million. The strong growth of tilapia exports (in particular the prepared and preserved) also indicate that the industry continued expansion and shifted to value added products. The United States remains the largest destination for China's tilapia products, accounting for 62 percent in export value and 58 percent in volume in 2007. Tilapia exports to Russia showed great potential and are expected to exceed \$45 million in value in 2007 although there were no exports before 2006.

Crawfish exports in 2007 are expected to fall to \$150 million from the \$175 million in the previous year. Exports to some leading buyers mainly Belgium and Demark fell by 59 and 15 percent respectively, although exports to the United States, the largest importer, remained almost unchanged. In the first ten months of 2007, eel product exports increased four percent in value with stable exports to Japan and rapid increase to Russia and Hong Kong. Although eel exports began to decline in 2005, their slow recovery in the recent two years was still mainly attributable to the "positive listing" imposed by Japan in May 2006 which raised the threshold for eel products entering the Japanese market.

#### **Aquatic export destinations became more diversified**

It is expected that China's aquatic export value to fifteen countries/regions will reach \$100 million and with fifteen more countries/regions in 2007. Japan continued to be the largest export destination, distantly followed by the United States and South Korea. The United States is the largest destination for China's fish/fillet, tilapia products and crawfish, accounting for 27, 62 and 83 percent in value, respectively, in the first ten months of 2007.

#### **Aquatic exports are subject to new requirements based on US-China Food Safety Agreement**

On June 28, 2007, the United States Food and Drug Administration (FDA) announced a broader import control of farm-raised catfish, basa, shrimp, dace (related to carp), and eel from China. In what FDA calls as "trade alert", they detained these products at the board

and run tests for antimicrobial residues that are unapproved and hazards human health. The shipments are detained until proven to be free of residues from unapproved drugs and antimicrobials such as nitrofurans, malachite green, gentian violet, and flouroquinolones.

The Department of Health and Human Service (HHS) of the United States/FDA and the Chinese regulatory agency (AQSIQ) conducted a series of consultations at the policy and technical level in order to resolve the trade issue. On the 3<sup>rd</sup> US-China Strategic Economic Dialogue held in December 2007, HHS and AQSIQ signed a Memorandum of Agreement on Food and Feed Safety. The key terms of the agreement are as follows:

**New Registration and Certification Requirements.** To enhance the safety of products sold in the United States, Chinese authorities will implement two programs, both subject to an audit by FDA within HHS. The first will require exporters to the United States to register with AQSIQ and agree to annual inspections to ensure their goods meet U.S. standards. AQSIQ will notify HHS/FDA of those that fail inspection, and why. HHS/FDA will maintain an online list of registered companies. AQSIQ will also notify HHS/FDA of all companies AQSIQ suspended or that have lost their registered status. To better contain and resolve safety problems, AQSIQ will implement a system to trace products from the source of production or manufacture to the point of exportation. Second, new certification requirements will help ensure products exported from China to the United States meet the U.S. food standards. Once AQSIQ's Inspection Bureau confirms a shipment meets HHS/FDA requirements, it will issue a certificate that carries a unique identifying number which AQSIQ must also file with HHS/FDA. To avoid counterfeit certificates, technical experts from both countries will work together to implement a secure electronic system. AQSIQ will also develop a testing program that provides, as determined by HHS/FDA, a high level of statistical confidence in the quality of products exported to the United States. HHS/FDA will explore mechanisms to notify AQSIQ when shipments of products exported to the United States are not certified, or come from a company not registered with AQSIQ.

**Greater Information-Sharing.** Each party commits to notify the other within 48 hours of the emergence of significant risks to public health related to product safety, recalls, and other situations. In the past, there was no system of notification. HHS/FDA can request a timely investigation regarding any covered product if there is reason to believe it could pose a health or safety risk. The agreement also includes terms on "Increased Access to Production Facilities" and "Implementation and Establishing Key Benchmarks" to implement the agreement and evaluate progress.

The agreement is expected to enhance the safety of China's aquatic products to the United States and facilitate trade. However, the enforcement of the agreement by AQSIQ remains challenging. The U.S. importers are advised to pay attention to the detailed requirements based on the agreement and to select suppliers wisely.

## Policy

### **China's policy favors smooth growth for aquatic production and exports**

In general, China's fishery production policy remains unchanged. Aquaculture production in 2006 and estimated production for 2007 indicate an average growth of four percent per year, higher than the three percent yearly growth for total aquatic production set in the 11<sup>th</sup> Five-Year Fishery Plan. According to the plan, total aquatic production is expected to increase at 3 percent annually to reach 60 MMT, while aquaculture production is expected to increase by 6 percent/year to 45.5MMT by 2010. The domestic catch production, however, is restricted to 12 MMT, down from the 14.5 MMT in 2005. The catch in other territorial seas is encouraged but the expected production will remain stable in general. Continued rapid GDP

growth will boost domestic demand for aquatic products dramatically, with 2010 aquatic consumption forecast at 12 Kg per capita. Based on the plan, MOA emphasized a more sustainable development model with rational resource utilization in 2007 through a nationwide plan on building of environment-friendly and healthy aquaculture demonstration bases. Through the intensification of the enforcement of relevant laws and regulations and technical extension, the plan aimed at promoting better use of resources, protecting the environment, producing safe products, and raising farmer income. According to MOA, more than 260 aquaculture production bases have been included in the plan and 200 will be awarded demonstration bases in 2007. These bases must meet requirements stipulated by MOA and are subject to regular supervision. Other measures included technology extension and drug use supervision. The aquaculture development plan by region/province remains unchanged in general. Large aquatic producing provinces will continue to focus on their most competitive products. Export-oriented aquaculture production/processing will continue to be concentrated in coastal provinces.

### **Implementation of aquaculture licensing system advanced**

The implementation of an aquaculture licensing system continued in 2007. According to MOA, 60 percent of counties will complete the overall water resources development plan and 70 percent of aquaculture entities will be licensed by the end of 2007. The implementation of licensing system nationwide is aimed at better regulating the industry. As mentioned above, the HHS and AOSIQ agreement signed in December 2007 will require exporters to the United States to register with AOSIQ and agree to annual inspections to ensure their goods meet U.S. standards.

### **The policy on aquatic processing trade remains unchanged**

China's government views the processing trade as an advantageous industry due to its role of generating new employment and producing rendered product that can be used as a feed ingredient for feed industry. Basically, the policy stipulates that imports of aquatic products for re-export purpose enjoy tariff and VAT free treatment. According to industry sources, the processing trade accounted for 40 percent of China's estimated \$9 billion aquatic exports in 2007. China's industry and official sources both claim that China is actively becoming the world's processing center for cod, mackerel and herrings. Industry sources note that the number of enterprises involved in "Processing Trade" is on the rise, especially in the large fishery provinces, Shandong and Liaoning.

### **Domestic aquatic catch is restricted**

The "Zero Growth" policy for domestic wild aquatic catch is to be maintained although the overseas catch is encouraged. The two-month summer fishing moratorium in China's seawater continued in 2007, and the three-month spring fishing ban in the Yangtze River entered its sixth year. In an effort to protect and restore ecological balance, the state and provincial fishery departments conduct frequent releases of aquatic fingerlings to waters nationwide. According to MOA, total sea catch in the first three quarters of 2007 declined by one percent over the same period in the previous year.

### **Trade Related Issues**

As China's government policy favors the "Processing Trade" of aquatic products, imports under "Processing Trade" will still be free of tariff and value added tax (VAT), the processed products, however, must be re-exported. Imports destined for China are subject to tariff and VAT (CH5089).

The elimination of tariffs for trade of agricultural products and aquatic products between China and ASEAN appears to facilitate China's imports from ASEAN. On January 1, 2006, based on the "Framework Agreement on Comprehensive Economic Cooperation between

China and the Association of South East Asian Nations (ASEAN)", China and ASEAN eliminated tariffs for trade of agricultural products and aquatic products. According to WTA, China's aquatic export value to ASEAN in 2006 increased 11 percent over the previous year. This growing trend, however, did not continue in the first ten months of 2007, and total aquatic export value declined by 13 percent over the same period of 2006. China's aquatic imports from ASEAN surged by 33 percent in value reaching \$178 million in the first ten months of 2007. Major imports are fish/frozen, crustacean, and mollusks.

No significant changes on aquatic trade have been reported as a result of the implementation of the "Asia-Pacific Trade Agreement". On July 1, 2006, the Asia-Pacific Trade Agreement (China, India, Korea/South, Bangladesh, Laos, and Sri Lanka) was implemented. The agreement reduced tariffs from 5-16 to about 2.5-11 percent for trade of most aquatic products between China and the other five countries, while tariffs for some aquatic products traded with Laos and Bangladesh were completely eliminated.

On October 1, 2006, based on China-Chile Free Trade Agreement, China reduced its import tariffs for fish meal (HS 23012010) of Chilean origin to 1.8 percent from the previous 2 percent.

According to AOSIQ, as of November 14, 2007, forty eight aquatic exporters have been "black listed" on AOSIQ's website because of product quality problems or illegal practices in trading. The aquatic products included roasted eel, shrimps and prawns and fish fillet destined to Japan, the United States and Korea/South. It is worth noting that out of the 48 "blacklisted" exporters, twenty four were listed because of attempting to escape AOSIQ's mandatory export inspection.

## **Marketing**

### **Chinese aquatic consumption pattern**

Traditionally, Chinese consumers prefer low-value, live seafood or fresh aquatic products. However, in more recent years, the availability of high-end aquatic products imported from overseas is increasingly widespread. While imported aquatic products, including those from the United States, are relatively expensive, food service operators and consumers often view imports as safe and favor the high quality image that U.S. aquatic products generally enjoy in the China market.

In much of inland China, such as Northwest and Northeast China, fresh aquatic products are somewhat scarce due to geographic isolation, underdeveloped cold chain and distribution systems, transportation bottlenecks, and uneven weather conditions. In these more isolated regions, aquatic products in dried, cured, frozen and other processed forms are more popular given their longer shelf life. In some regions, meat is often the preferred animal protein source based on historical consumption patterns. However, in recent years, high-end seafood imports such as salmon, black sea bass, halibut, lobster, and even fresh oysters can be found on the menus of mid-high level restaurants in many parts of China. The perceived superiority of U. S. seafood with regard to texture and flavor compared to local substitutes continues to win favor with many high-end chefs and fine dining establishment professionals.

### **Healthy, nutritious and safe seafood**

While price is still one of the most significant factors influencing food purchasing decisions, it is no longer the only criteria for China's increasingly health-conscious consumers and fine dining operators. Some specific fishery products have benefited from medical research that links seafood consumption with good health. This is particularly true for deep sea fin fish, which often contain high levels of heart healthy fatty acids such as Omega 3. Media coverage

related to these findings continues to play an important role in driving consumer demand for such products including fish oil consumption in urban China.

A variety of food safety issues, such as carcinogens in mandarin fish, and drug and chemical residues in fishery products, have increasingly become important to Chinese consumers. While this is a challenge for seafood consumption in general, it also presents an opportunity for many U.S. seafood products. Urban dwellers in China have become much more aware of product origin, and many consciously avoid consuming domestic freshwater fish. Imported seafood including wild catch product purchases are often heavily influenced by food safety. Health consciousness, nutrition, and brand awareness all increasingly affect consumer perception and purchasing behavior here. The HRI sector has a strong influence on consumer behavior, especially at the high-end of the seafood and fishery product spectrum. Effective marketing and promotional activities promoting U.S. fishery products as safe and versatile support consumer awareness and HRI sector knowledge. Products with established brand recognition and reputations for positive health benefits often enjoy strong sales in the food service sector as well as in some retail formats. By contrast, seafood products with little or no product origin recognition usually face a much steeper market development curve.

Quick Service Restaurant giant KFC has focused on developing healthy menu offerings over the past year, and their current line featuring fish items have been a big success in the China market. Earlier this year, the company successfully launched a deep-sea cod promotion, and currently is running a new 'Wild Alaskan Salmon' nugget promotion. Post understands from industry sources that if the promotion is successful in meeting company sales objectives, KFC may add a new menu item, the Alaska Salmon burger. Several other QSR operators in China also offer seafood items as a regular part of their menus given the popularity of seafood sandwiches in China.

### **Variety**

Seafood from the United States has a reputation for superior quality, variety, and high price. Caught from coast to coast, a large variety of U.S. seafood is available for export compared to the more limited supplies from third country suppliers. In addition, the high standards related to food safety of U. S. products have helped establish a high quality and safe product image even prior to the current raised awareness levels related to product safety issues. The HRI sector primarily purchases high-end fish and fishery products, even in coastal cities famous for their own local seafood products such as Qingdao, and Dalian, where domestic seafood is abundant. Providing focused training and education for food service professionals supports the proper preparation, product handling, and use of seafood products. Lifestyle media campaigns, market development activities, and other promotional efforts have proven successful, although the market remains small. However, market development activities are effective tools for educating both the HRI trade and ultimately Chinese consumers about the quality and availability of U.S. seafood.

Stringent food safety procedures, advanced and controlled harvesting, processing, and cold chain logistics all support the near fresh conditions post catch of U.S. seafood exports. China's cold chain facilities and logistics while improving still have a long way to go in to meet both evolving domestic requirements as well as international standards. Shellfish, such as scallops and oysters from the United States often enjoy strong sales as domestic shellfish have a poor reputation for meeting food safety requirements in large part due to heavy metal contamination. Sea cucumber, live lobster, and Dungeness crab reportedly enjoy strong HRI demand despite their relatively high prices. Other popular species and varieties exported to the China include squid, eel, salmon, tuna, cod, black cod, and snow crab.

Rapidly changing and increasingly modern, fast-paced lifestyles, especially for those under 35, mean consumers often prefer to purchase value-added products in supermarket or



hypermarket formats. Portion controlled, ready-to-cook, breaded, frozen or seasoned fish fillets are increasingly being positioned to meet changing consumer needs. These easy to prepare, high quality, nutritious and safe products continue to grow in popularity. However, while these seafood products are easy to prepare it is advisable to provide clear preparation and cooking method instructions. This is important because traditionally consumers consume fresh or live fish-fishery products and for the most part are not familiar with value-added product preparation.

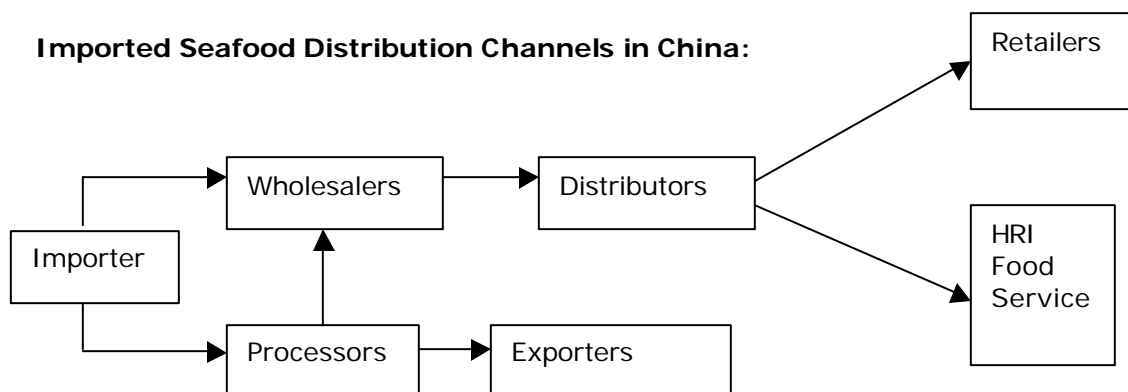
**Competition**

While demand for high-quality seafood and fishery products has expanded in China, competition has also intensified with a growing number of international suppliers entering the market. The recent 12<sup>th</sup> China Fisheries and Seafood Expo in Dalian grew by more than 30 percent over the previous year, suggesting domestic and international interest is growing in the seafood sector. For example, at last years show, Canada only had few exhibitors, but this year an entire pavilion was dedicated to showcasing a wide range of Canadian seafood. Also, present this year were Russia, Norway, Korea, Japan, as well as European and Latin American suppliers who continue to develop a larger presence at the show as well as in the China market.

Beyond third country supplier competition, local or domestic competition is on the rise. Local products continue to gain market share with improved quality, lower prices, and greater availability. Based on discussions with local traders, a growing number of consumers desiring high-end seafood products are unable to find consistent supplies although they are willing to pay for these more expensive imports. On the other hand, local seafood distributors and suppliers complain that due to the higher prices of imports, many retailers are hesitant to stock higher quality and more expensive seafood products in their stores.

While superior quality, premium prices, and high levels of food safety are all characteristic of U.S. seafood and fishery products, exporters need to be aware of trade policy matters related to exporting to and selling in China. Investment in a long-term marketing strategy to differentiate products from domestic or other international competitors is important in this market. Potential market entrants need to conduct extensive desktop and preliminary research before determining if the market is appropriate for their products. Trademark registration and IPR protection is also strongly recommended for all U.S. product exports. Participating in annual seafood exhibitions in China is an also a good way to test the water and establish initial face-to-face contact with importers and distributors. In addition, finding a suitable partner with similar market goals supports long-term market development and sales success.

**Imported Seafood Distribution Channels in China:**



## Trade Tables

## Trade of Certain Aquatic Products (Volume: MT; Value: \$ Million)

## Imports by Category

HS Code		Jan-Dec/2005		Jan-Dec/2006		Jan-Oct/2007	
		Volume	Value	Volume	Value	Volume	Value
	<b>Total</b>	1,955,813	2,904	2,192,947	3,183	1,949,033	2,944
0302	Fish, Fresh	18,554	46	4,062	24	4,621	26
0303	Fish, Frozen	1,579,214	2,200	1,730,681	2,418	1,507,771	2,218
0304	Fish, Fillet	22,592	44	22,100	45	13,699	30
0305	Fish, Dried, Salted, Brined	7,631	31	8,415	31	7,375	28
0306	Crustaceans	93,805	290	97,155	292	76,746	257
0307	Mollusks & Other	221,960	268	315,049	336	320,116	331
1604	Prepared and Packaged Fish and Caviar	3,301	8	3,867	13	4,641	18
1605	Prepared and Packaged Crustaceans and Mollusks	8,756	17	11,618	24	14,064	36

Source: World Trade Atlas

## Exports by Category

HS Code		Jan-Dec/2005		Jan-Dec/2006		Jan-Oct/2007	
		Volume	Value	Volume	Value	Volume	Value
	<b>Total</b>	2,378,595	7,184	2,791,776	8,600	2,259,548	7,084
0302	Fish, Fresh	72,290	173	54,571	144	38,377	91
0303	Fish, Frozen	429,141	571	521,458	680	352,486	495
0304	Fish, Fillet	715,013	1,924	796,162	2,289	648,222	1,978
0305	Fish, Dried, Salted, Brined	50,260	212	53,855	223	44,969	187
0306	Crustaceans	131,034	508	117,062	398	81,477	270
0307	Mollusks and Other	264,966	616	294,079	651	219,957	479
1604	Prepared or Packaged Fish and Caviar	340,380	1,333	476,653	1,815	501,429	1,750
1605	Prepared or Packaged Crustaceans and Molluscs	375,511	1,847	477,936	2,400	372,631	1,834

Source: World Trade Atlas

## Aquatic Products Trade by Country of Origin (Value: \$ million)

## Imports by Country of Origin

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct* 2007
Total	2,351	2,904	3,184	2,945
Russia	781	1,094	1,213	1,144
<b>United States</b>	245	343	409	429
Japan	110	171	235	152
Canada	137	171	174	139
Norway	130	156	160	138
India	48	57	91	57
Netherlands	52	65	83	80
Korea, South	79	110	78	118
Thailand	41	59	67	72
Peru	32	27	64	60
New Zealand	57	68	56	46
Korea, North	261	93	44	24
Indonesia	35	40	43	39
Iceland	26	42	39	30
Taiwan	16	22	32	45
Other	302	386	397	372

## Exports by Country of Destination

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct* 2007
Total	6,330	7,183	8,601	7,084
Japan	2,609	2,642	2,802	2,209
<b>United States</b>	946	1,259	1,738	1,361
Korea, South	864	880	993	737
Germany	231	277	360	310
Hong Kong	362	332	287	232
Spain	94	191	239	197
United Kingdom	106	136	212	188
Mexico	140	147	189	141
Canada	120	153	186	166
Malaysia	99	133	177	137
Russia	73	119	176	261
Belgium	46	89	116	107
Netherlands	58	87	111	99
Australia	60	72	103	90
France	40	55	94	82
Other	482	611	818	767

Source: World Trade Atlas

**Imports of Fish, Frozen by Country of Origin (Value: \$ million; Volume: MT)****(Value: in \$ million)**

<b>Country</b>	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
<b>Total</b>	1,517	2,200	2,418	2,218
Russia	753	1,060	1,145	1,090
United States	201	295	339	378
Japan	80	140	206	125
Norway	109	134	133	110
Netherlands	52	64	82	78
India	22	38	68	40
Canada	33	60	57	42
New Zealand	39	44	41	35
Korea, South	28	52	40	37
Iceland	23	39	38	30
Thailand	20	35	34	43
Other	158	240	235	211

**(Volume: in metric ton)**

<b>Country</b>	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
<b>Total</b>	1,306,202	1,579,214	1,730,681	1,507,771
Russia	590,728	692,917	706,827	616,572
United States	131,487	175,723	190,633	209,572
Japan	65,983	95,801	149,979	98,329
India	38,573	57,803	114,174	65,806
Netherlands	96,415	87,893	108,016	108,165
Norway	89,827	81,442	73,136	52,465
Thailand	37,818	54,405	61,094	70,543
Canada	27,592	43,356	38,011	30,623
New Zealand	33,473	38,645	35,477	31,361
Indonesia	12,428	27,643	28,710	28,443
Korea, South	20,561	26,074	25,489	24,254
Other	161,317	197,511	199,136	171,639

Source: World Trade Atlas

## Imports of Flatfish by Country of Origin (Value: \$ million; Volume: MT)

(Value: in \$ million)

	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	153	242	255	239
<b>United States</b>	56	105	112	127
Russia	42	70	61	42
Canada	7	17	15	12
Taiwan	3	1	8	1
Denmark	1	4	8	5
Korea, South	7	5	7	5
Greenland	3	6	5	10
Iceland	4	5	5	5
Norway	3	8	5	5
Other	26	21	28	27

(Volume: in metric ton)

	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	125,665	168,193	168,142	154,601
<b>United States</b>	46,687	69,378	74,018	81,103
Russia	40,754	53,242	43,236	32,993
Canada	5,063	11,834	8,190	6,914
China	5,022	1,827	6,773	1,419
Taiwan	1,039	1,041	5,383	1,107
Korea, South	4,873	3,134	4,714	2,793
Denmark	1,172	2,186	4,033	2,736
Greenland	2,609	3,895	3,543	6,016
Norway	2,049	4,208	2,277	1,884
Iceland	2,606	2,730	2,032	1,934
Other	13,790	14,718	13,943	15,702

Source: World Trade Atlas

**Imports of Cod by Country of Origin (Value: \$ million; Volume: MT)****(Value: in \$ million)**

<b>Country</b>	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007*</b>
Russia	553	748	650	575
United States	66	60	73	58
Netherlands	30	33	40	29
Japan	11	12	27	25
Norway	7	11	27	29
New Zealand	17	18	16	8
Korea, South	12	17	14	15
Germany	3	13	7	6
Canada	1	2	5	4
Chile	2	8	4	0
United Kingdom	0	6	4	1
Greenland	2	0	2	4
Other	19	25	20	12
<b>Total</b>	<b>725</b>	<b>954</b>	<b>889</b>	<b>767</b>

**(Volume: in metric ton)**

<b>Country</b>	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007*</b>
Russia	411,846	499,088	396,857	293,255
Netherlands	64,719	56,115	59,257	40,038
United States	37,146	32,643	34,810	23,527
Japan	14,986	15,650	25,836	22,408
New Zealand	13,534	15,510	13,301	9,503
Korea, South	9,499	12,339	11,833	8,868
Norway	4,777	4,374	10,793	9,791
Ireland	8,614	5,565	7,786	16
Germany	6,115	8,888	5,873	6,422
Korea, North	1,468	3,595	4,073	981
Canada	1,140	1,503	3,491	2,674
Other	11,891	14,520	18,366	6,687
<b>Total</b>	<b>585,735</b>	<b>669,791</b>	<b>592,275</b>	<b>424,169</b>

Source: World Trade Atlas

**Imports of Plaice by Country of Origin (Value: \$ million; Volume: MT)****(Value: in \$ million)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Total	97.2	184.2	183.3	171.7
United States	53.5	98.2	109.4	123.3
Russia	28.5	56.7	47.1	33.7
Canada	2.3	9.9	6.6	3.8
Denmark	1.0	1.8	5.6	0.3
Korea, South	4.1	3.3	5.4	1.9
Iceland	1.1	3.1	1.8	0.3
China	1.1	0.5	1.5	0.8
Netherlands	0.1	0.2	1.4	0.9
Norway	1.4	2.0	0.9	1.2
Spain	2.2	2.5	0.6	2.3
Other	1.9	6.1	3.0	3.2

**(Volume: in metric ton)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Total	89,732	138,002	132,093	121,413
United States	45,500	67,524	72,737	79,526
Russia	30,169	47,397	37,805	29,489
Canada	1,905	8,236	4,603	3,244
China	3,558	1,555	4,439	1,344
Korea, South	3,176	2,511	4,137	1,349
Denmark	753	1,293	2,873	356
Netherlands	81	155	942	730
Spain	1,773	2,768	758	1,520
Iceland	685	1,407	685	396
Germany	323	1,524	677	287
Other	1,809	3,631	2,436	3,171

Source: World Trade Atlas

**Imports of Salmon by Country of Origin (Value: \$ million; Volume: MT)****(Value: in \$ million)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Dec 2007</b>
Total	126	239	337	244
Japan	44	87	115	51
Russia	32	69	96	37
United States	16	45	78	113
Norway	24	20	25	30
Chile	4	5	12	7
Canada	3	9	8	4
Korea, South	1	1	2	0
Denmark	2	1	0	0
Other	1	0	1	1

**(Volume: in metric ton)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Dec 2007</b>
Total	89,084	132,865	162,730	117,311
Japan	35,567	45,913	54,645	26,627
Russia	22,402	41,276	49,900	19,003
United States	17,294	32,437	42,045	58,032
Chile	2,268	2,881	5,617	3,794
Norway	6,700	3,532	4,443	6,082
Canada	2,061	4,891	3,146	2,093
Korea, South	399	405	991	121
Other	2,393	1,531	1,942	1,558

Source: World Trade Atlas



**Imports of crustaceans by Country of Origin (Value: \$ million; Volume: MT)****(Value: in \$ Million)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Total	312.0	289.7	292.2	257.0
Canada	85.3	94.3	96.7	76.0
Russia	13.5	20.5	37.7	37.0
Greenland	15.2	23.0	21.9	16.0
Thailand	11.5	13.3	20.4	18.0
India	17.3	14.5	16.8	11.0
Japan	13.6	17.2	15.1	13.0
Indonesia	15.0	12.2	13.4	10.0
United States	11.5	11.2	9.3	10.0
Australia	10.9	15.1	8.7	9.0
Malaysia	1.5	5.4	6.2	9.0
Denmark	9.2	8.9	5.7	4.0
Other	107.6	54.1	40.3	44.0

**(Volume: in metric ton)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Total	95,870	93,805	97,155	76,746
Canada	38,076	38,372	37,084	23,475
Russia	3,532	5,894	12,681	12,690
Greenland	7,602	10,793	10,922	8,083
Japan	3,072	4,428	4,473	3,411
Thailand	4,553	4,212	4,449	3,715
India	4,647	3,513	4,222	2,451
Denmark	4,701	4,760	3,431	1,851
Indonesia	3,682	3,224	2,671	2,016
United States	2,958	2,568	2,522	3,621
Australia	2,082	2,412	2,024	1,302
Other	20,965	13,630	12,676	14,131

Source: World Trade Atlas

**Imports of Mollusks and Other by Country of Origin (Value: \$ million; Volume: MT)****(Value: in \$ Million)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Total	332	268	336	331
Peru	30.6	22.6	54.4	45.0
United States	15.1	23.8	48.4	29.8
Korea, North	128.1	51.1	38.2	19.6
Korea, South	45.4	50.1	32.1	70.5
Argentina	0.2	1.5	23.1	14.3
Russia	7.2	9.4	21.1	12.4
New Zealand	14.4	21.6	13.1	10.7
Canada	7.7	8.3	12.3	12.3
Taiwan	4.5	3.1	11.4	29.2
Other	79.3	76.5	81.7	87.7

**(Volume: in metric ton)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Total	253,644	221,960	315,049	342,130
Peru	41,205	28,582	70,169	62,772
United States	17,477	24,508	47,954	19,443
Korea, North	71,833	53,513	41,652	16,678
Argentina	498	1,621	26,130	20,365
Korea, South	26,882	26,551	19,151	88,406
Taiwan	8,080	6,373	18,147	55,941
New Zealand	15,667	22,928	12,126	11,271
Russia	4,223	3,245	12,025	2,507
India	9,193	5,698	7,039	6,434
Mexico	4,033	5,978	6,935	3,253
Other	54,553	42,962	53,721	55,061

Source: World Trade Atlas

**Exports of Fish Fillet by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	1,472	1,924	2,289	1,978
United States	430	624	645	526
Japan	370	423	446	366
Germany	224	265	340	287
United Kingdom	98	115	183	150
Canada	61	88	107	96
Netherlands	46	71	88	75
France	33	40	72	62
Poland	31	52	52	45
Spain	19	24	47	56
Korea, South	44	36	41	44
Russia	5	18	39	44
Other	112	166	229	227

**Exports of Prepared and Packaged Fish and Caviar by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	1,190	1,333	1,815	1,750
Japan	940	933	1,020	828
United States	54	83	303	342
Korea, South	46	80	80	70
Russia	16	34	69	137
Hong Kong	73	81	60	64
Mexico	2	3	49	72
Malaysia	9	22	38	22
Indonesia	1	13	34	10
Spain	5	8	22	24
Italy	2	5	12	18
Ukraine	1	4	11	17
Other	42	66	117	146

Source: World Trade Atlas

**Exports of Prepared and Preserved Crustacean and Mollusks by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	1,402	1,847	2,400	1,834
Japan	532	657	765	605
United States	236	323	550	340
Korea, South	80	108	168	141
Spain	19	91	116	49
Mexico	100	102	111	64
Hong Kong	111	115	100	86
Malaysia	45	78	92	83
Belgium	19	48	72	54
Australia	21	22	59	58
Russia	44	55	56	69
Other	196	247	310	284

**Exports of Prepared and Preserved Mollusks by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	522	719	792	651
Japan	348	423	441	338
United States	46	94	102	79
Korea, South	36	56	88	65
Russia	41	51	52	59
Hong Kong	4	16	19	15
Malaysia	2	11	18	11
Canada	7	9	11	11
Ukraine	1	3	9	12
Korea, North	1	2	4	14
Other	35	56	47	48

Source: World Trade Atlas

## Exports of Shrimps and Prawns by Destination (Value: \$ million; Volume: MT)

(Value: in \$ million)

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	1,037.1	1,086.9	1,337.7	954.9
United States	188.7	144.8	309.4	135.5
Japan	225.4	247.8	263.0	214.7
Spain	8.7	103.7	118.4	78.5
Mexico	106.8	111.6	110.4	58.0
Hong Kong	132.6	118.9	101.7	76.8
Korea, South	70.1	72.7	93.9	71.2
Malaysia	46.5	68.0	72.9	67.0
Australia	31.8	25.2	56.4	55.6
Taiwan	14.3	20.5	29.8	38.8
Canada	30.1	22.8	23.6	28.1
Belgium	1.3	14.3	19.1	11.1
United Kingdom	1.9	7.4	10.3	16.0
Korea, North	0.0	1.9	5.4	15.2
Russia	1.9	2.0	2.0	9.2
Italy	1.2	8.9	10.3	8.7
Vietnam	16.2	32.2	15.0	4.0
Papua New Guinea	0.0	0.0	18.0	0.0
Other	159.5	84.3	78.2	66.5

(Volume: in metric ton)

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	220,421	223,087	269,908	194,189
United States	35,176	28,967	56,044	24,455
Japan	36,366	36,855	41,142	40,476
Korea, South	36,869	30,482	39,142	23,444
Spain	2,243	26,644	28,339	20,451
Hong Kong	30,457	24,537	20,080	14,287
Mexico	16,940	17,780	17,247	9,375
Malaysia	8,899	11,168	11,880	11,436
Australia	5,899	4,887	10,441	9,371
Taiwan	6,736	8,428	10,122	10,514
Other	40,837	33,340	35,472	30,381

Source: World Trade Atlas

**Exports of Shrimps and Prawns by Category (Value: \$ Million; Volume: MT)****Value: in \$ million)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Aquatic Shrimp & Prawn	1,037	1,087	1,338	955
Shrimps & prawns, inc in shell, frozen	411	327	187	139
Shrimps & prawns, inc in live, Fr/Ch/Salted/Dried/In Brine	37	33	36	20
Shrimps & prawns, prepared or preserved	589	727	1,115	796

**(Volume: in metric ton)**

	<b>Jan-Dec 2004</b>	<b>Jan-Dec 2005</b>	<b>Jan-Dec 2006</b>	<b>Jan-Oct 2007</b>
Aquatic Shrimp & Prawn	220,421	223,087	269,908	194,189
Shrimps & prawns, inc in shell, frozen	90,630	72,293	41,986	40,605
Shrimps & prawns, inc in live, Fr/Ch/Salted/Dried/In Brine	27,979	21,870	27,279	11,287
Shrimps & prawns, prepared or preserved	101,812	128,924	200,643	142,299

Source: World Trade Atlas

**Exports of Crawfish by Destinations (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
United States	37	29	60	48
Belgium	13	32	48	40
Denmark	13	24	31	12
Sweden	11	19	19	18
United Kingdom	2	6	6	8
Germany	4	4	3	3
Japan	1	1	2	1
Other	7	8	7	9
Total	88	125	175	139

**Exports of Eel Products by Destinations (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	735	589	596	509
Japan	647	505	498	399
Indonesia	3	6	34	10
United States	15	17	27	25
Russia	1	3	9	17
Hong Kong	48	40	8	21
Australia	2	1	2	2
Korea, South	12	7	2	7
Singapore	4	2	2	4
Poland	1	5	1	6
Germany	0	0	1	6
Other	4	1	10	12

Source: World Trade Atlas

**Exports of All Tilapia Products by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	156	232	369	385
United States	116	184	252	237
Mexico	28	29	59	58
Russia	0	0	12	37
Israel	1	3	9	7
Germany	0	2	5	5
Belgium	0	3	4	4
Puerto Rico (U.S.)	1	2	4	2
Hong Kong	1	2	3	4
Canada	2	3	3	2
Poland	0	0	2	4
Netherlands	0	0	2	4
United Arab Emirates	0	1	1	1
Other	6	5	11	19

**Exports of Tilapia/Prepared or Preserved by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	14	28	232	360
United States	12	23	161	228
Mexico	1	2	37	56
Israel	0	0	6	6
Russia	0	0	6	36
Germany	0	0	4	3
Belgium	0	1	3	3
Puerto Rico (U.S.)	0	0	3	2
Hong Kong	0	1	2	4
Poland	0	0	2	3
Canada	1	1	2	2
Netherlands	0	0	1	3
Other	0	1	6	15

**Exports of Tilapia/Fillet by Destination (Value: \$ million)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	103	163	92	10
United States	78	133	65	2
Mexico	20	19	13	0
Russia	0	0	5	1
Israel	0	2	2	1
Germany	0	2	1	2
Belgium	0	2	1	1
Other	4	6	5	3

Source: World Trade Atlas



**Exports of Tilapia/Fillet by Destination (Volume: MT)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	36,242	53,494	31,233	3,915
United States	27,293	43,357	21,398	716
Mexico	7,540	6,578	4,671	142
Russia	8	22	2,246	546
Israel	152	595	779	346
Germany	0	619	376	698
Belgium	0	512	279	242
Other	1,248	1,811	1,484	1,226

**Exports of Tilapia/Prepared and Preserved by Destination (Volume: MT)**

Country	Jan-Dec 2004	Jan-Dec 2005	Jan-Dec 2006	Jan-Oct 2007
Total	7,781	14,494	90,855	153,887
United States	6,622	10,608	58,294	89,889
Mexico	568	1,509	18,675	28,893
Russia	0	0	2,513	15,212
Hong Kong	137	190	715	1,176
Canada	409	240	498	509
Israel	0	257	2,375	2,752
Germany	0	53	1,356	902
Puerto Rico	0	20	953	878
Singapore	0	0	841	579
Belgium	0	437	812	941
Poland	0	52	622	1,240
Netherlands	0	106	535	1,604
Dominican	0	126	316	546
United Kingdom	0	9	309	474
Zambia	0	0	250	859
United Arab Emirates	0	364	240	958
Kuwait	0	0	221	822
France	0	21	62	780
Ukraine	0	0	31	790
Other	45	502	1,238	4,080

Source: World Trade Atlas