# Glitnir – China Seafood Industry Report

November 2007

# Contents


| | Page |
|---|---|
| Foreword, main findings and value chain | [ 3 ] |
| 01. China's Foreign Trade – A General Overview | [ 6 ] |
| 02. The Chinese Seafood Industry – Production | [ 13 ] |
| 03. The Chinese Seafood Industry – Processing | [ 24 ] |
| 04. The Chinese Seafood Industry – Distribution | [ 27 ] |
| 05. The Chinese Seafood Industry – Consumption | [ 32 ] |
| 06. Species Focus: Shrimp | [ 36 ] |
| 07. Glitnir Seafood Stockwatch | [ 43 ] |
| 08. Glitnir Bank – General Information | [ 47 ] |

# Foreword

Dear Reader,

We are now in our fourth year of publication of area or species specific seafood industry reports. We will issue 7 reports altogether this year, focusing on one country or region in each report, and for the first time this year a species specific report looking at the global market for Tuna.

Last year, Glitnir published its first China Seafood Industry Report during the China Fisheries and Aquaculture Expo in Qingdao, where Glitnir was the first Bank ever to host a booth. Both the report and Glitnir's presence at the Expo received positive feedback, and a little later Glitnir opened an office in Shanghai, its first in Asia and the first ever for a Bank from Icelandic origins. A year on, it is a pleasure to present the 2007 China Seafood Industry Report. This report has a different angle from last year, but threefold structure as well, namely an overview of China's foreign trade in general terms, the Chinese seafood industry and finally focuses in on shrimp aquaculture like we did with Tilapia last year.

In December 2006, Glitnir opened a representative office in Shanghai, to better serve its international seafood clients. With a team of experienced bankers and industry specialists, Glitnir can offer advisory as well as a wide range of investment banking services and tap in on the extensive portfolio of financial products the Bank has to offer.

In 2007, China's economic revolution shows no signs of abating, with double digit growth reaching its highest level in the first half of the year at 12 percent. Exports of Chinese seafood are a good example of China's ability to produce a quality product at highly competitive prices making China by far the largest exporter of seafood, outstripping the number 2 country more than fourfold.

We trust you find this report of benefit. We at Glitnir are proud of our strong team of seafood industry experts, and look forward to working for you in our quest to make the seafood industry even more dynamic, efficient and profitable.

You can contact the team via **seafood@glitnir.is** and **www.glitnir.is/seafood**

Best regards,
Glitnir Seafood Team

# Main findings

- China is the largest producer of seafood in the world, representing some 35 per cent of total global seafood production.
- Seafood consumption in China is expected to reach 35.9 kg/per capita in 2020, an increase of 40 per cent from the 2006 average which was at 25.6 kg/per capita. Consumption rise is in line with increasing purchasing power and strong preference for seafood among Chinese consumers.
- Total seafood production in 2005 totaled 51 million MT retaining a stable year-on-year growth of 4.08 per cent, while a year earlier it grew 4.16 per cent.
- Aquaculture, capture, production and processing is concentrated in a few regional centers in China, notably around Dalian and Qingdao in the North and in Zhejiang, Fujian and Guangdong provinces in the South. Shandong, where Qingdao is the capital, was the leader among China's provinces in the production of seafood in 2005, with a total of 7.4 million MT.
- Out of the top ten aquaculture products harvested in Chinese seawater, six are different varieties of shellfish, including the top three. While freshwater aquaculture is predominantly dependant on carps, which make up 72 per cent of the total, species such as shrimp and tilapia are gaining momentum.
- The growth and successes of Chinese seafood production in 2007 has been overshadowed by a series of import bans from trading partners relating to antibiotic contamination, carciogens, and before that traces of chloramphenicol.
- China is well underway with the implementation of its commitments agreed under the accession to the WTO, which started in 2001. Besides enhancing overall trade in terms of improvement in regulations, transportation and logistics, day-to-day administration etc, there are two notable benefits of the WTO agreement to seafood trade:
  - Reduction of tariffs
  - Enhanced soy bean import to China which can be used for feed
- The EU is China's biggest trading partner, while the US remains a vital export destination with strong growth in agri- and aquaculture related products. Japan is the major export destination for Chinese seafood, receiving around half of all exports in recent years
- China imported over USD 1 billion worth of fish from Russia in 2005. In total, China imported USD 3.2 billion of seafood the same year, which compared to export of 7.2 billion MT in the same year makes for a huge surplus in the seafood trade. Main imports include frozen Alaska pollock and cod from Russia and fishmeal from Peru.
- China is expected to be able to meet most of the rising demand in the domestic market.
- China is the world leader in shrimp aquaculture and is expected to produce well over a million tons in 2007.

# The Chinese seafood industry

The purpose of this report is to assist Glitnir's current and potential clients in creating value by making sound investment decisions in the seafood industry in China. A good approach includes considering different elements of the industry value-chain and deciding on which one or more to focus on:

**Supply of Raw Materials**
Catch / Culture

**Processing**
Primary / Secondary

**Distribution**
Trading / Import & Export

**Consumption**
Trends / Species

## Growing aquaculture across China with regional industry concentration.

- Main trends on the supply side of the Chinese seafood industry include:.
  - Growth of aquaculture in southern regions, especially Guangdong.
  - Dropping seawater catches with landings concentrated in the Northern cities of Qingdao and Dalian and the Central coastal province of Zhejiang.

## Not only does China process its world's biggest share of output, but is a processing centre for seafood from other countries.

- Main trends in Chinese seafood processing include:
  - Chinese consumers are increasingly turning to processed fish even though live fresh fish still dominates.
  - High level of processing of imported frozen raw material for re-export.

## China is the biggest seafood exporter in the world.

- Main trends in the import and export trading of Chinese seafood products include:
  - Exports of certain popular species such as shrimp and tilapia have seen strong sales growth, which is expected to continue.
  - The successes of Chinese seafood in 2007 was under-mined by a series of import bans from major trading partners.

## The retail and restaurant market in China has taken off

- Main trends in seafood related retail activities in China include
  - Chinese consumers are increasingly turning towards supermarkets and hypermarkets for their shopping.
  - Fast and convenient are key words in the food retail markets at present.

# China's Foreign Trade – A General Overview

01.

# Highlights: overview of Chinese foreign trade

GLITNIR

- The tremendous transformation of the Chinese economy from the doldrums to master class has gone unnoticed by hardly anybody. The Chinese economic revolution has been export-led with electronics and machinery manufactures taking up a large share accounting for 94 per cent of total export value.
- Exports of Chinese food and other agri- and aquaculture related goods are increasing every year.
- Of the top ten Chinese agri- and aquaculture related imports into the US, four are seafood categories including the top three.
- In 2006, the US imported USD 288 billion of goods from China and exported USD 55 billion the other way.
- Trade with China represents 40 per cent of the total US trade deficit. In July 2007, the deficit amounted to USD 23.8 billion, the second highest month in history behind the record breaking month of October 2006, where the deficit hit 24.4 billion (according to US figures).
- China's trade surplus reached USD 177.5 billion last year, 74 per cent higher than in 2005, a rise that will intensify pressure on Beijing to open its markets further and accelerate the revaluation of the RMB.

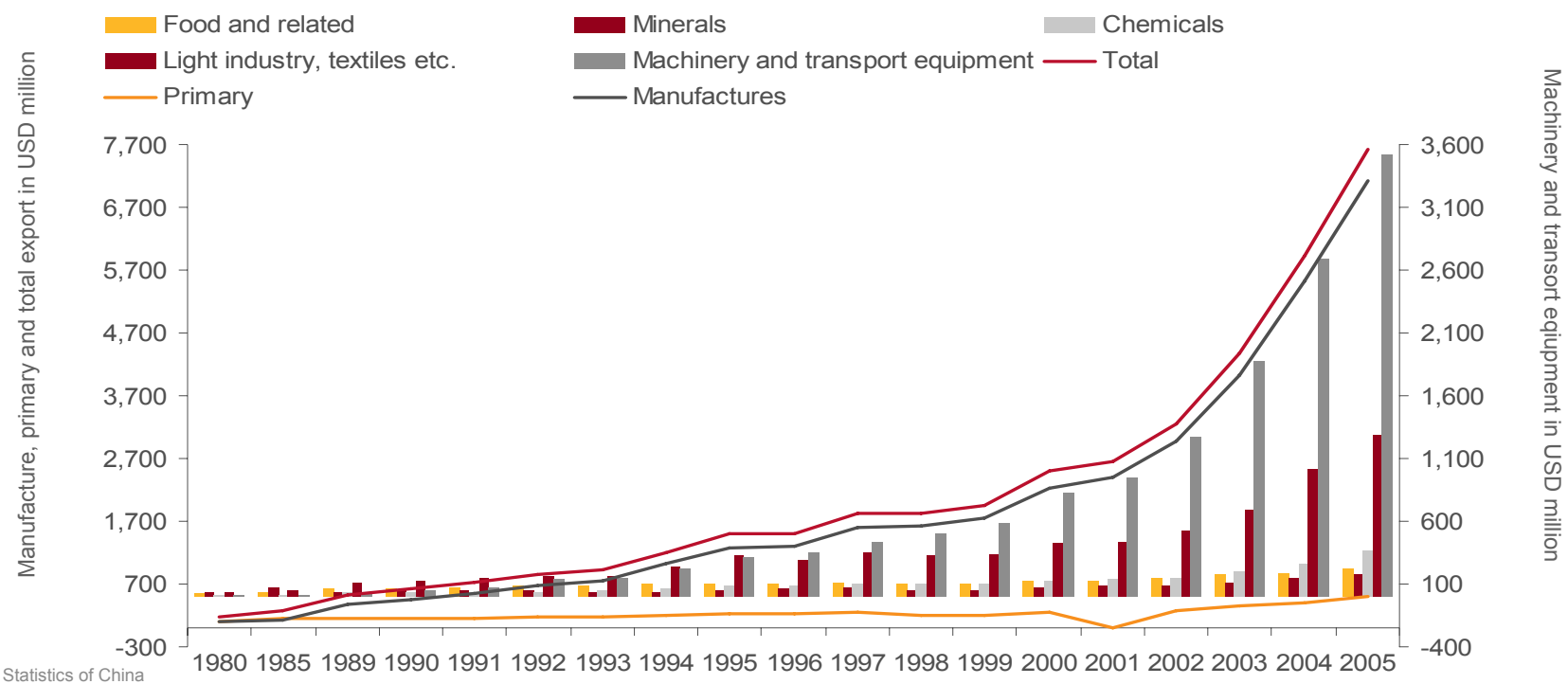
# Boom in manufactures export

## China's export-led growth owes 94 per cent of its total to one category: manufactures

- Before the reform era started around 1980, China's major export categories were fairly balanced, with primary goods and manufactures at similar levels.
- During the reform era, manufactures have fuelled the Chinese export boom, accounting for 94 per cent of the total value of exports in 2005.
- Within the category of manufactures, machinery and transport equipment enjoy the largest share by far, or more than 49 per cent in 2005. In 25 years, China has acquired a leadership position in the manufacturing of electronics.

**1980-2005 Composition of China's exports**

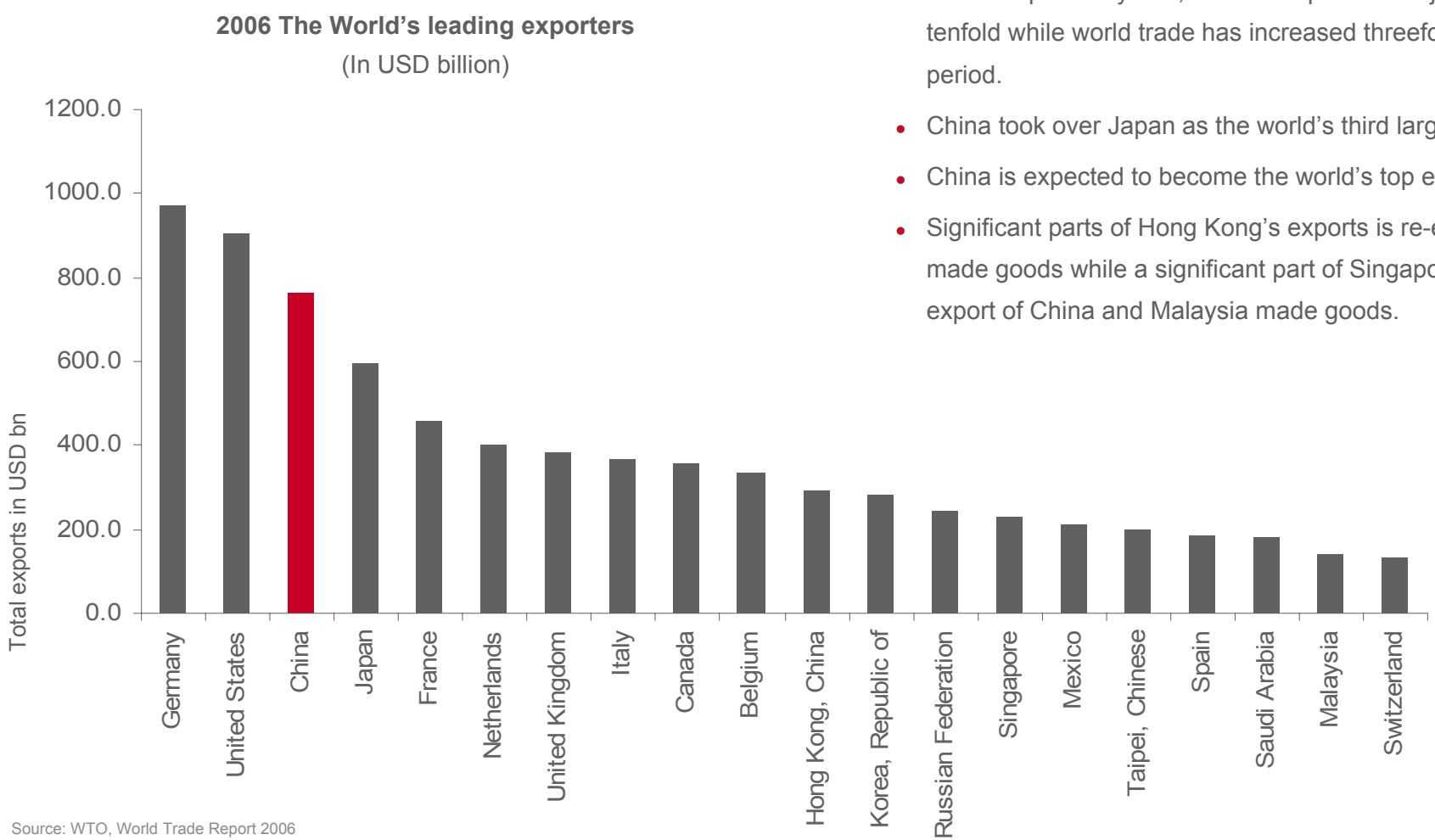
(In USD million)




Source: National Bureau of Statistics of China

# Leading export countries

## Climbing fast up the list of top exporters




- Over the past 15 years, China's exports have jumped more than tenfold while world trade has increased threefold in the same period.
- China took over Japan as the world's third largest exporter in 2004.
- China is expected to become the world's top exporter in 2015.
- Significant parts of Hong Kong's exports is re-export of Chinese made goods while a significant part of Singapore's exports is re-export of China and Malaysia made goods.

Source: WTO, World Trade Report 2006

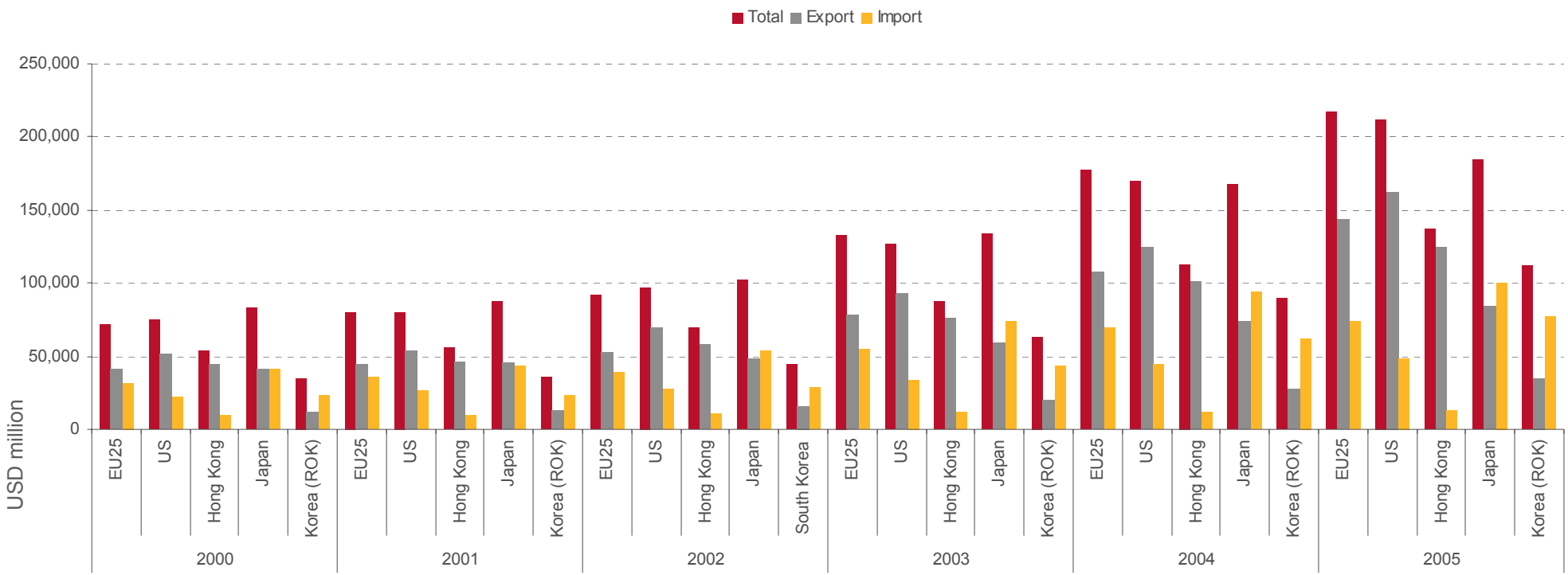
# The EU and US are China's major trading partners

## Imbalanced trading relationships with major partners

- In 2005, the EU was China's largest trading partner while the US remained a lucrative export destination. China imported more goods from Japan than from any of its major trading partners. In the same year, China had large trade surpluses with the EU, US and Hong Kong. Hong Kong is a gateway for Chinese goods with huge imports and comparatively tiny exports. China had trade deficits with Japan and Korea.

- According to Eurostat, the EU was China's biggest trading partner in 2006 with overall bilateral trade of USD 335bn (RMB 2,612bn). However, similar figures compiled by the US Census make the US China's biggest trading partner with overall bilateral trade at USD 343bn (RMB 2,675bn). Eurostat, the US Census and their Chinese counterpart all employ different methods to measure trade with other countries.

**2000-2006 total trade with major partners (in USD million)**

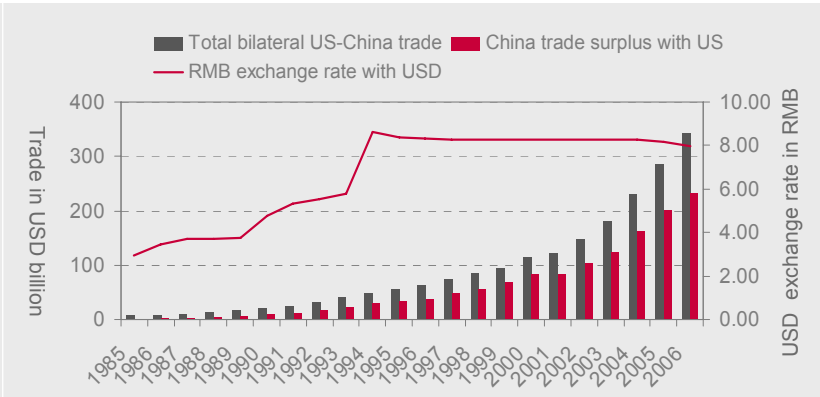


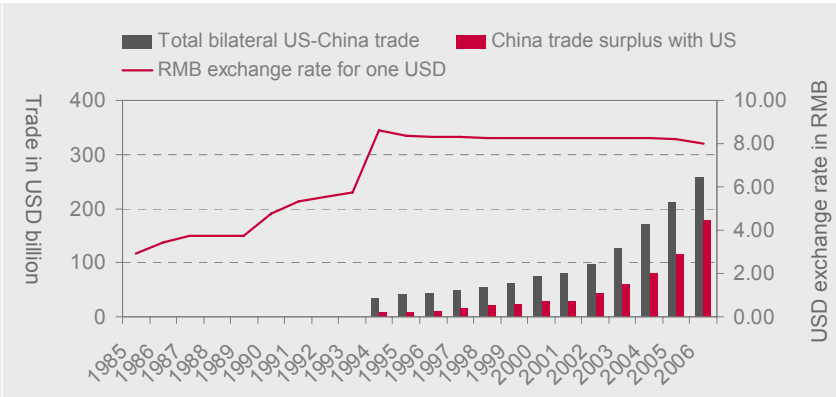

Source: National Bureau of Statistics of China (custom statistics)

# China's main trading partners

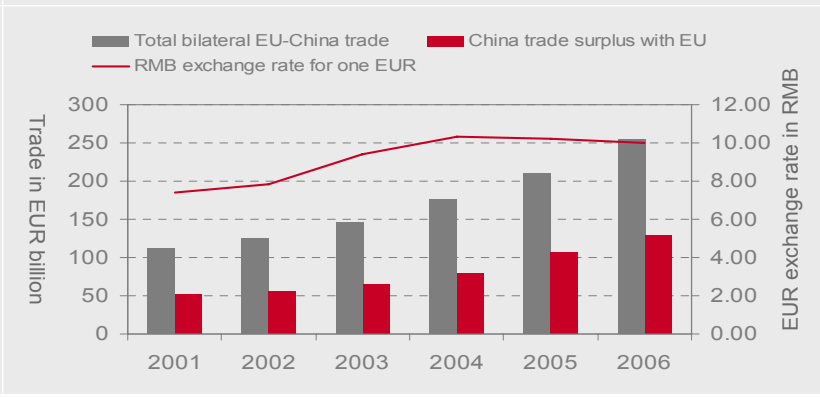
- The bar diagrams below show the differences in estimates of trade deficits as measured by the US, EU and China. The line shows the development of the exchange rate between the Chinese RMB on the one and the USD and EUR on the other.
- One of the issues at the core of the trade disputes between China on the one hand and US and EU on the other, is that Chinese statistics for bilateral trade are lower vis-à-vis those of main trading partners.
- Differences can partially be explained by a series of factors relating to different measurement techniques, re-export through Hong Kong, and the monitoring time period. Furthermore, the US measures its exports using the FAS method (free-alongside-ship, which omits loading at origination ports), while China measures exports using CIF values (cost-insurance-freight).

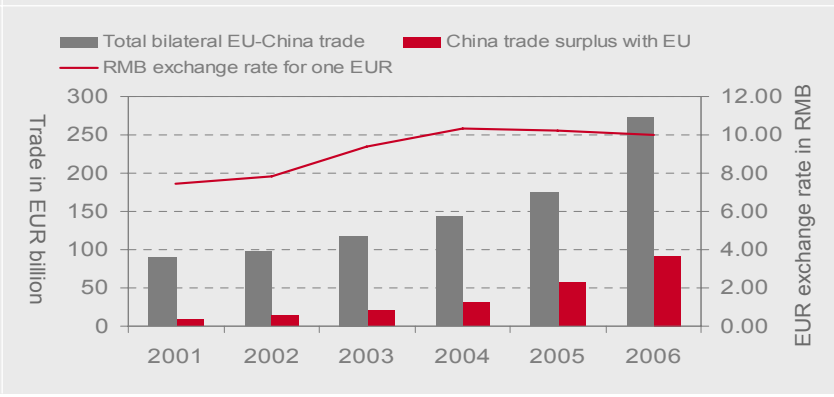
## US-China trade




## EU25-China trade




*Source: National Bureau of Statistics of China, US Census Bureau, European Commission, Eurostat*

# Seafood: China's most important agricultural export to US

GLITNIR

## Four out of top ten export agricultural export categories are seafood, including the top three

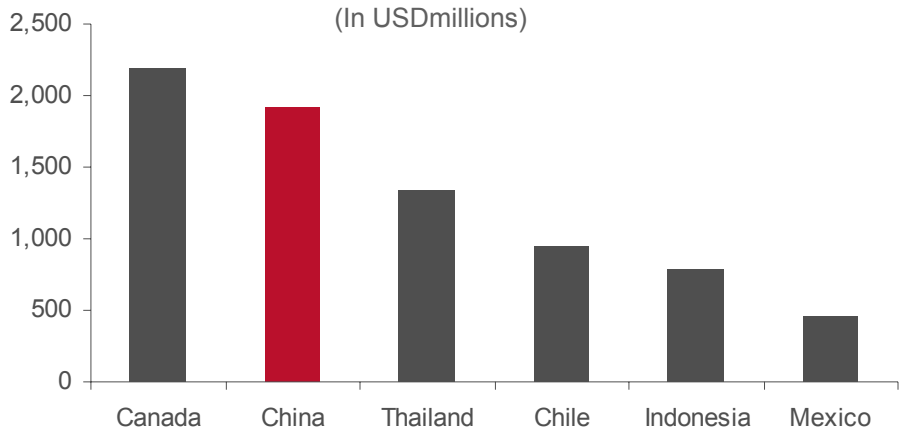
- The fact that seafood has established itself so prominently on the list of agricultural imports into the US is not necessarily because of the sheer size of these imports. Inevitably, the size of each category is determined by the definition of what fits within the category.
- Fish and fruit rank high on the list of agri- and aquaculture related products into the US, while protein like poultry and cattle rank further behind.
- The value of fish imported into the US is 5 times bigger than fruit juices in value even though it is a little more than three times lesser in volume.
- China was the second leading importer of seafood to the US in 2006 while it was the seventh for agricultural products. With the two combined China is third on the list.
- No European country makes it to the list of top exporters of seafood into the US.

**2006 Main agricultural export categories from China to US**

| | Import | Value *(USD ´000)* | Tons |
|---|---|---|---|
| 1 | Other fish & products (not listed below) | 1,0761,631 | 332,714 |
| 2 | Shrimp and prawns | 331,935 | 68,364 |
| 3 | Mollusks | 245,607 | 62,364 |
| 5 | Miscellaneous horticultural products | 226,047 | 109,910 |
| 6 | Fruit, processed | 207,427 | 247,554 |
| 7 | Fruit juices *(kilolitres)* | 201,935 | 933,566 |
| 8 | Other crustaceans | 159,352 | 22,051 |
| 9 | Feed ingredients & fodders | 147,850 | 59,988 |
| 10 | Miscellaneous industrial use | 143,780 | 12,574 |

**2006 Leading suppliers of US seafood imports**

(In USDmillions)




*Source: CRS Report for US Congress, July 17, 2007*

# Chinese Seafood Industry – Production

02.

Supply of raw material catch / culture ▶ Processing primary / secondary ▶ Distribution trading / import & export ▶ Consumption trends / species

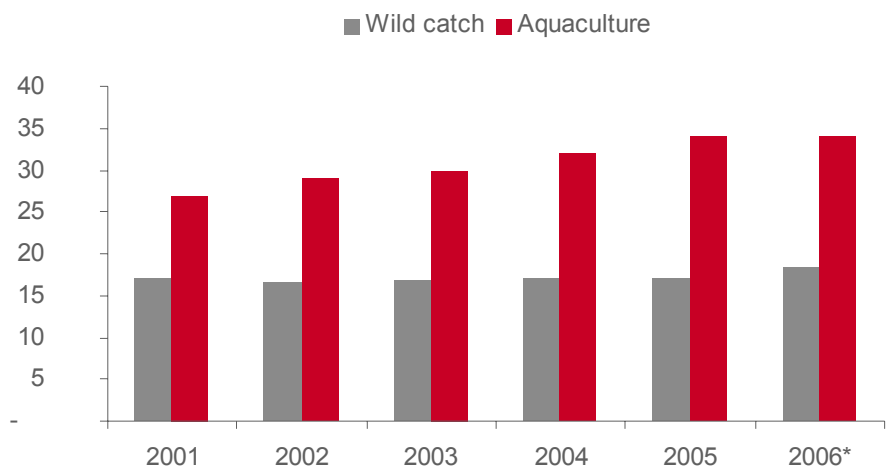
# China's seafood production

## Freshwater supply is growing faster than seawater supply

- Total aquatic production in 2005 was 51 million tons and retained a stable year-on-year growth in 2005 of 4.08 per cent while the year earlier it grew 4.16 per cent
- Due to over-exploitation of marine and inland fisheries, the Chinese government maintains zero or even negative growth policies in wild fisheries while the growth of aquaculture is a priority
- Freshwater aquatic production in 2005 increased by 6.3 per cent from a year before which is slightly lower than the 6.6 per cent year-on-year growth the previous year
- Seawater production in 2005 grew by 2.5 per cent from the year before while in the previous year the growth was 5.1 per cent

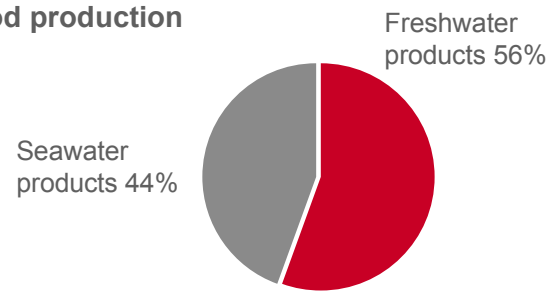
**2001-2006 China capture and aquaculture**

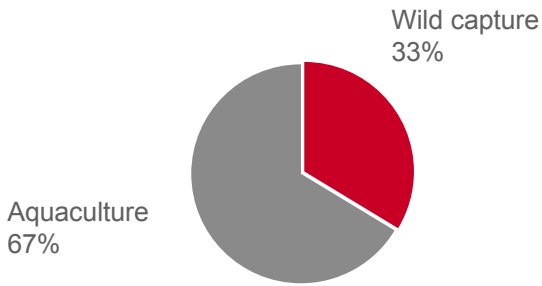
(In millions of tons, estimates for 2006 are by the USDA)

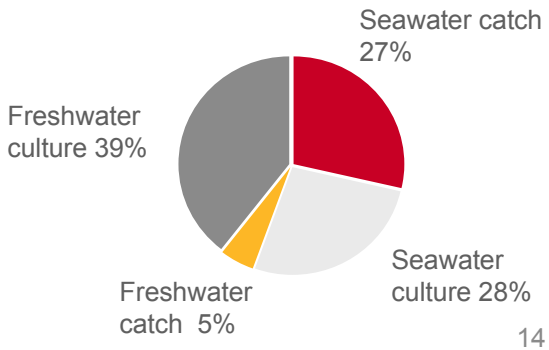



Source: USDA Foreign Agricultural Services GAIN Report 2006

**2005 Breakdown of China's seafood production**



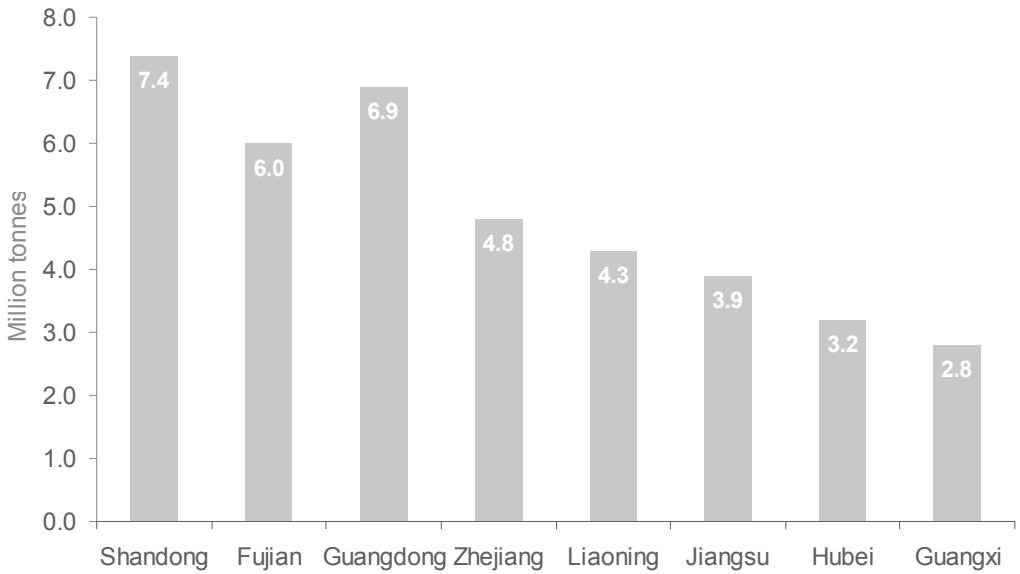



# Shandong – largest in seafood among China's provinces

**2001-2006 China map highlighting seafood producing provinces**

In the year 2005

- No. 1 in aquatic production: Shandong province (7.4 million MT)
- No. 1 in seawater catch: Zhejiang province (3.22 million MT)
- No. 1 in freshwater catch: Hubei province (400.000 MT)
- No. 1 in seawater culture: Shandong Province (3.42 million MT)
- No. 1 in freshwater culture: Guangdong province (2.7 million MT)




Source: FAO National Fishery Sector Overview (NFSO) 2006

# Wild capture and marine resources

## China has three main offshore fishing areas while Chinese vessels are now fishing globally

**China main offshore fishing areas**

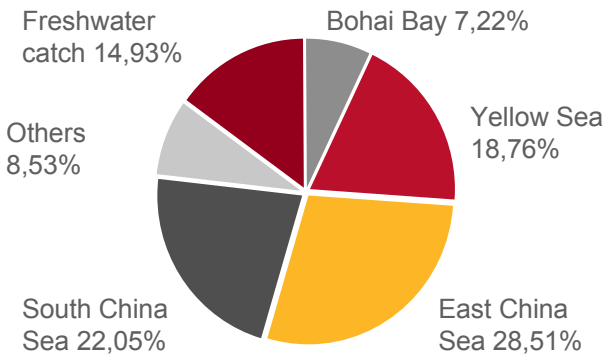
### In Chinese offshore fishing areas, there are:

- Over 1,700 kinds of fish, out of which 300 are economically exploitable.
- In addition, there are about 2000 kinds of seaweeds, 300 kinds of shrimp and crabs and 200 kinds of economically exploitable mollusks

### China's three main offshore fishing areas are commonly referred to as:

- Yellow Sea and Bohai Bay
- East China Sea
- South China Sea

**2005 Distribution of wild capture in China**




Source: FAO National Fishery Sector Overview (NFSO) 2006

# Zero or negative growth in seawater catch

- Yellow Sea and Bohai Bay
  - Small yellow-fin tuna
  - Ling
  - Pacific herring
  - Prawn
  - Hair shrimp
  - Jellyfish
  - Kelp

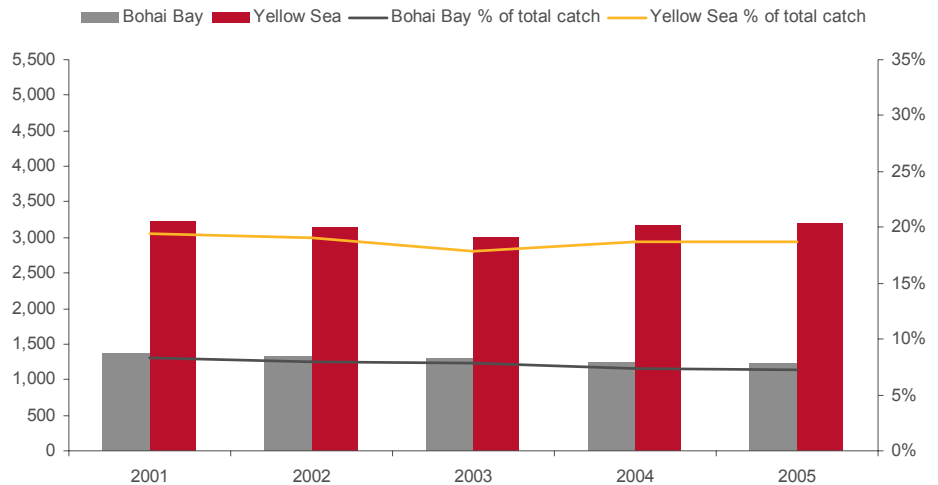
- East China Sea
  - Hairtail
  - Big yellow-fin tuna
  - Small yellow-fin tuna
  - Cuttle fish
  - Pomfret
  - Moray
  - Shuttle crab

- The Yellow Sea and Bohai Bay of North Coast China are emblematic of the zero growth in Chinese seawater catches

- East China Sea is the Chinese ocean going area where catches are highest comparatively. However, it is also the area where the drop in catches is perhaps the most visible.

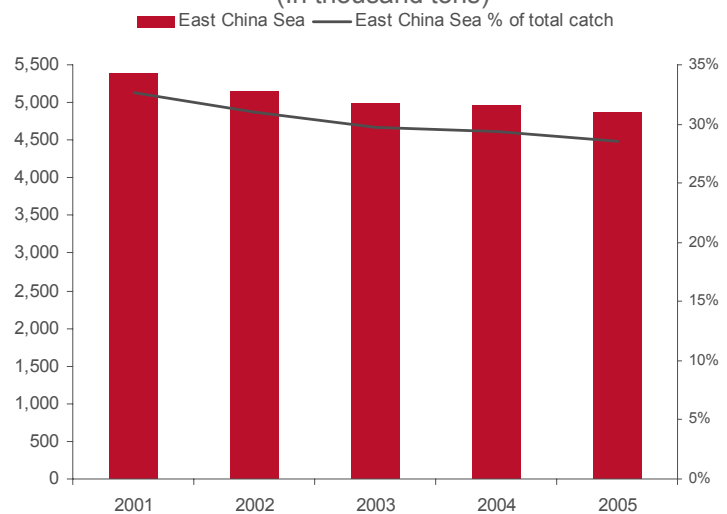
**2001-2005 Catches and share of China total from Yellow Sea and Bohai Bay**

(In thousand tons)




**2001-2005 Catches and share of China total from East China Sea**

(In thousand tons)




Source: USDA Foreign Agricultural Services GAIN Report 2006

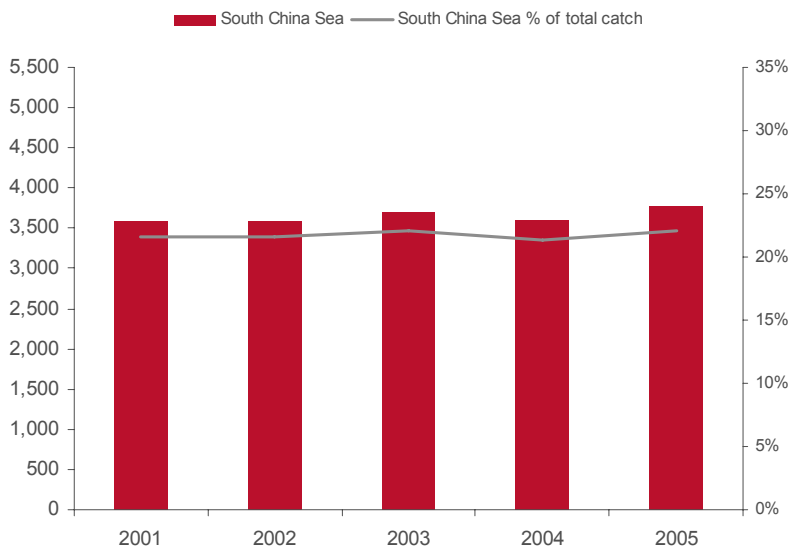
# Freshwater catch on a nominal rise

- South China Sea
  - Sardine
  - Tunny
  - Bonito
  - Swordfish
  - Shark

- The South China Sea has seen nominal increases and decreased in different years over the last five years.

**2001-2005 Catches and share of China total from South China Sea**

(In million tons)

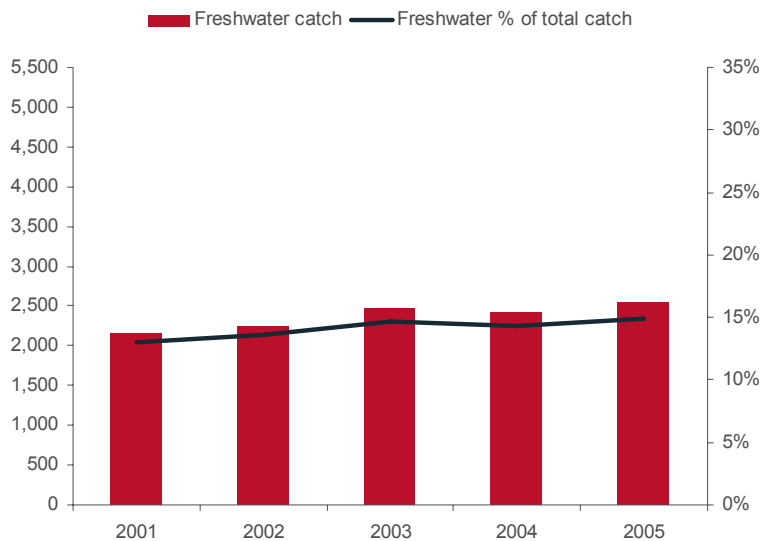



- Freshwater
  - Redfish (northern regions only)
  - Codfish (northern regions only)
  - Carp
  - Naked carp
  - Loach

- Growth in freshwater catches is evident.

**2001-2005 Catches and share of China total from Freshwater**

(In million tons)



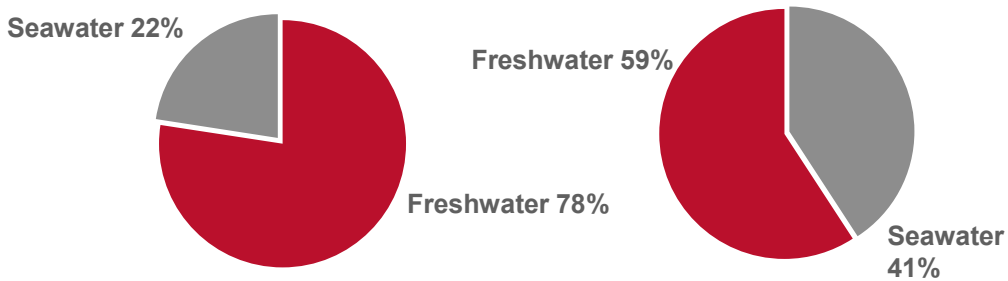

Source: USDA Foreign Agricultural Services GAIN Report 2006

# Aquaculture in China

## Aquaculture in freshwater exceeds seawater in volume and area

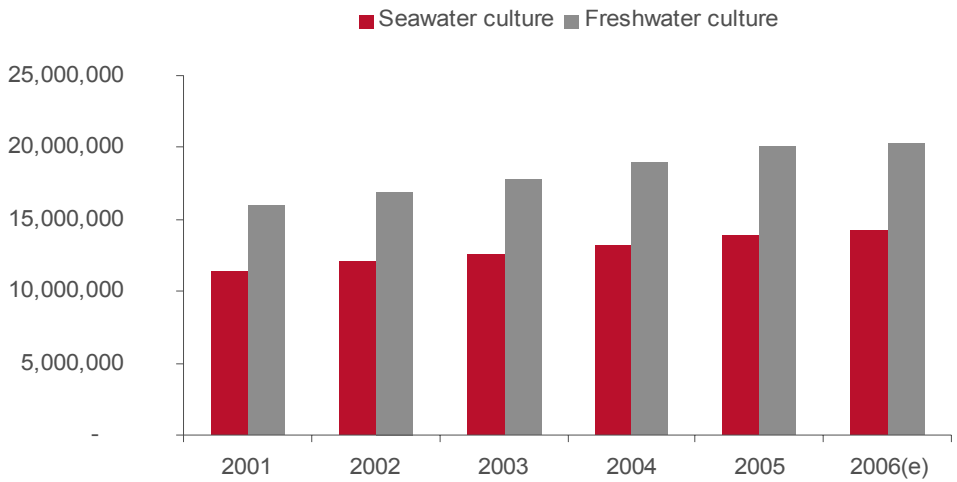
- In 2005, the total culture area reached 7.55 million hectares, up 4 per cent from the year before, while growth between 2003 and 2004 was 2.5 per cent.
- About 22 per cent of the total culture area is in seawater, while 78 per cent is in freshwater. However, total production is divided more evenly – 41 per cent in seawater and 59 per cent in freshwater.
- Culture area expansion is expected to slow down, as the priority has been shifted to increased productivity, rather than expanding area. Factors related to water shortages and marine diversity also play a part.

**2005 Aquaculture area and production in percentages**



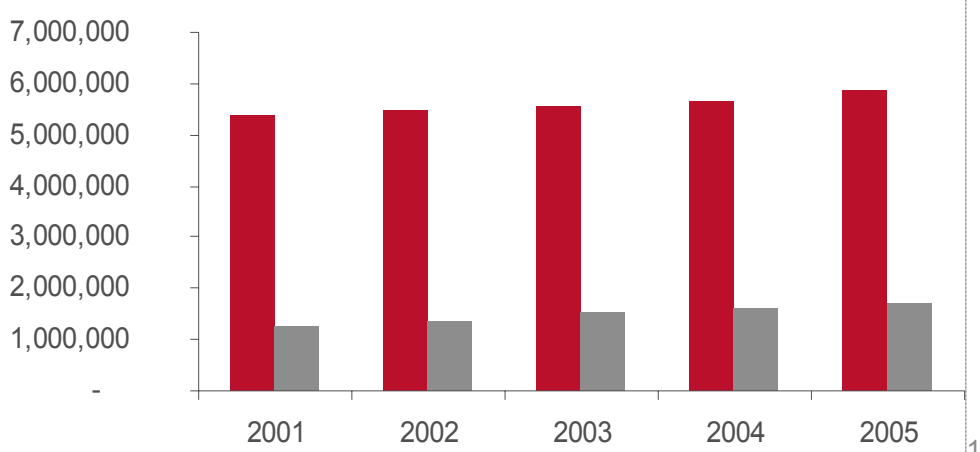

**2001 – 2006 Aquaculture production in China**

(In tons, 2006 estimates by the USDA)




**2001 – 2005 Development of area under use for Aquaculture in China**

(in hectares)



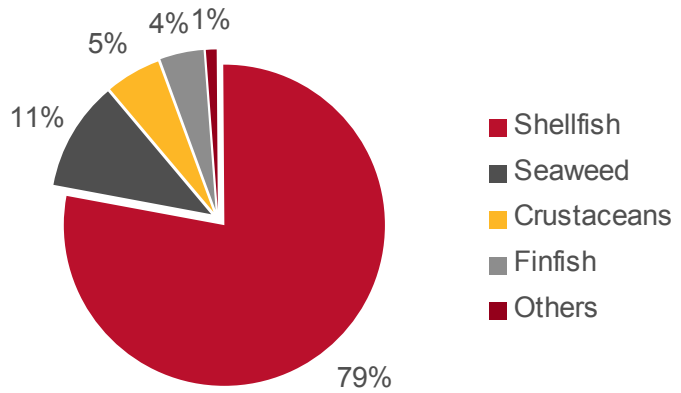

Source: USDA Foreign Agricultural Services GAIN Report 2006

# Shellfish – the most cultured product in seawater

## Figures for aquaculture in seawater confirm a taste for clams and other shellfish in China

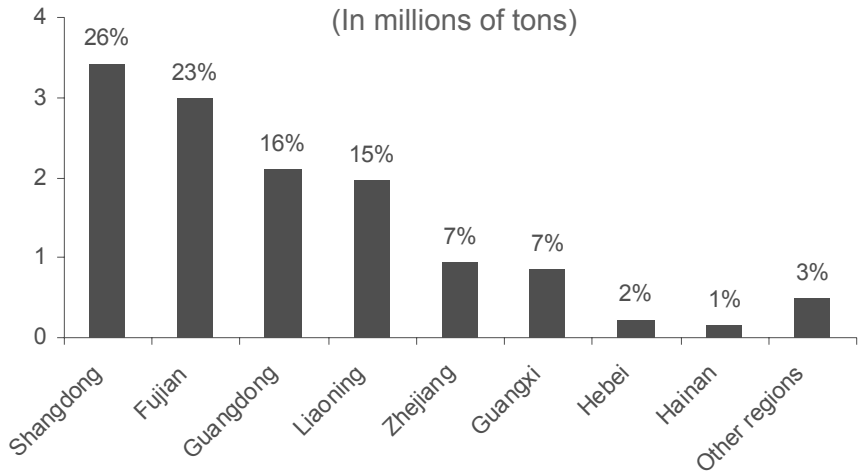
- Out of the top ten aquaculture products harvested in Chinese seawater, six are different varieties of shellfish, including the top three. This love of shellfish among the Chinese is reconfirmed by the fact that almost four fifths of the total seawater aquaculture area is devoted to the production of shellfish.
- In 2004, marine culture output including aquatic plants reached 13 million MT, 3.5 million MT greater than in 1999.
- Shandong is the largest among China's seawater aquaculture provinces with 26 per cent of total production.
- Guangdong which is a costal province and the leader among China's province for freshwater aquaculture is only third when it comes to seawater aquaculture.
- In 2004, the national marine aquaculture area was 1.6 million hectares, 520,000 hectares more than in 1999.

**2004 Seawater farming areas by main products**

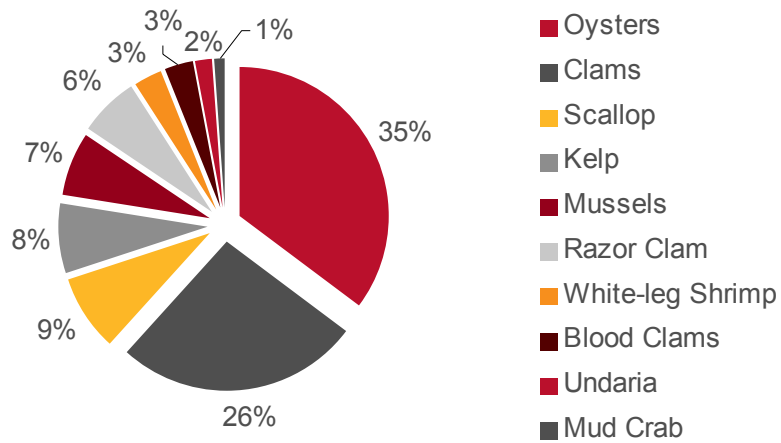



**2004 Seawater aquaculture output by provinces**

(In millions of tons)




**2004 Top ten products harvested in seawater**



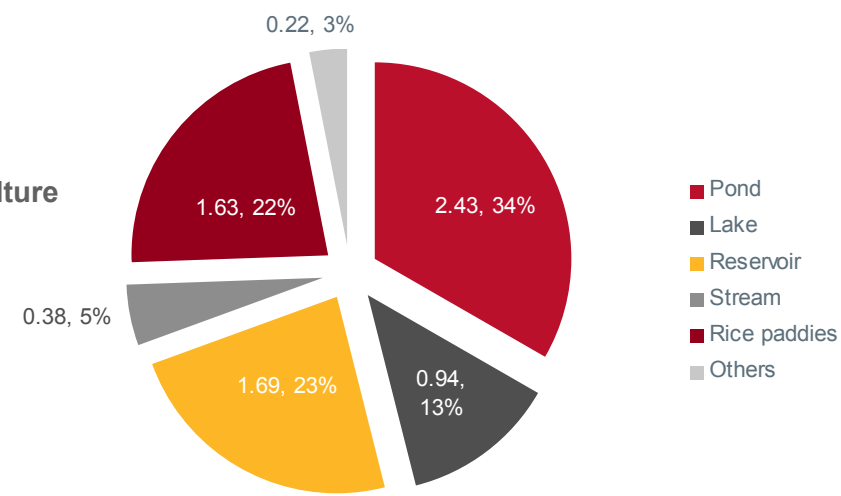

Source: FAO National Fishery Sector Overview (NFSO) 2006

# Freshwater farming areas

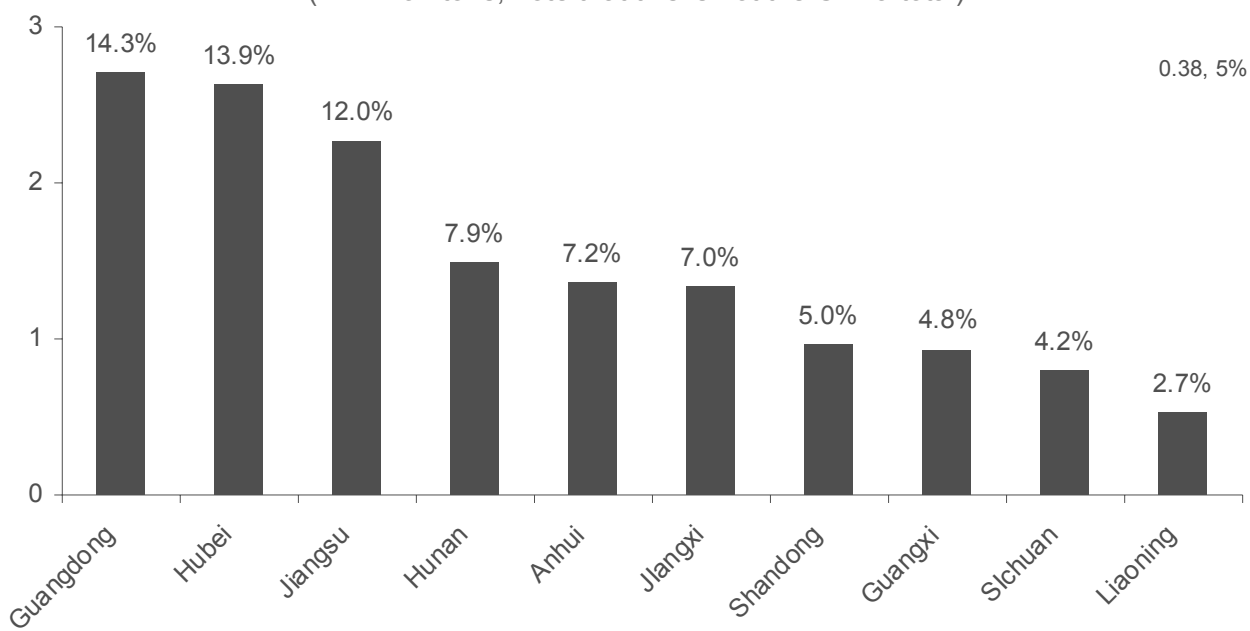
## Freshwater fish farming is dominated by small and medium-sized individual farms

| | |
|---|---|
| Largest pond farming: | Hubei province (340,279 hectares) |
| Largest lake farming: | Anhui province (193,279 hectares) |
| Largest reservoir farming: | Jiangxi province (132,559 hectares) |
| Largest stream farming: | Jiangsu province (113,014 hectares) |

**2004 China inland aquaculture area by type**
**(First reference in million hectares)**




**2004 Provincial output totals and share of total output of freshwater aquaculture**
(In million tons, note that this is not the China total)



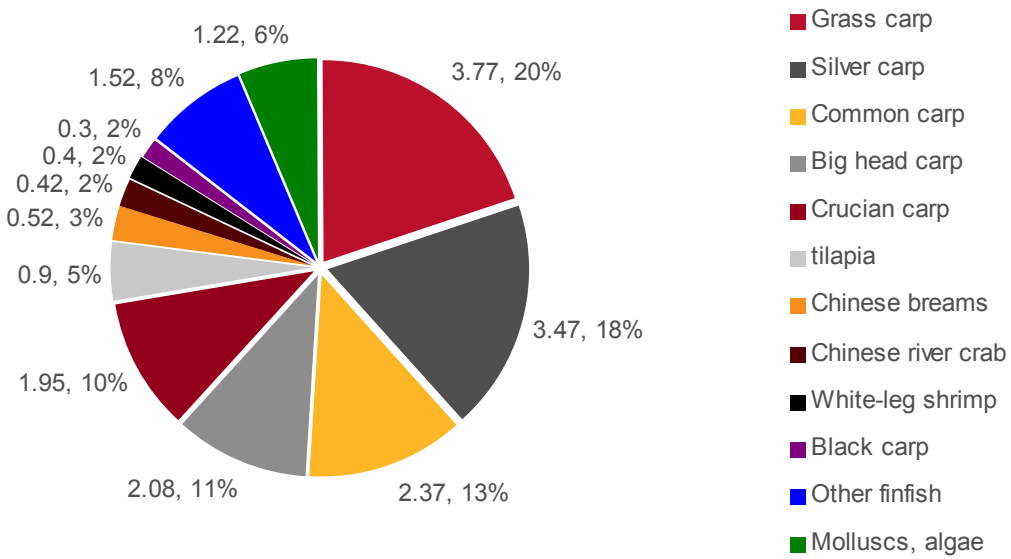
# Carps – 72 per cent of total freshwater culture output

## Carp is most likely to find its way on to the plates of Chinese families

- The dominant form of freshwater farming in China is pond farming, occupying 34 per cent of the total freshwater farming area and producing a little over 70 per cent of the total output
- Aquaculture is often a side product to paddy agriculture where fry is put into over floated rice paddies where it grows among the rice plants.
- Carps accounted for the majority of the output, contributing more than 72 per cent of all freshwater output in 2004. That is equivalent to 46 per cent of all Chinese aquaculture output and 29 per cent of total Chinese fisheries output
- Apart from the carp family, tilapia and shrimp also occupy an important place in freshwater aquaculture in China.
- In Tilapia production China, with 2006 production of 1,1million tons, is by far the largest producer worldwide, 5 times bigger than the no. two producer, Egypt.
- Vannamei shrimp has become the cash crop of Chinese aquaculturists. Out of the approximately 500,000 tons of shrimp produced in China in 2003, 300.000 tons were Vannamei shrimp. The production of shrimp, and in particular the dominant Vannamei variety, is expected to increase even further.

**2004 freshwater culture output by species**

(First number refers to output in million tones)




Source: FAO National Fishery Sector Overview (NFSO) 2006

# Product quality control and monitoring

GLITNIR

## In response to sharp criticism from abroad, the Chinese government has implemented a series of measures to address product quality control and monitoring

- The growth and successes of Chinese seafood production in 2007 was overshadowed by a series of import bans from trading partners.
- It is difficult to put an estimate on the extent of the problem
  - e.g. in 2005, Assistant Minister of Commerce Huang Hai gave the estimate that 8 per cent of domestic food does not reach the national qualification standard for food safety.
- A part of the problem lies in the underdevelopment of many aquaculture farms and food processors and a highly fragmented industry.
  - e.g. the General Administration of Quality Supervision, Inspection and Quarantine estimated that there were 448,153 food processors with 352,815 having fewer than 10 employees.
- A recent announcement from the Ministry of agriculture described the implementation of the following actions to tackle the problem:
  - More than 700 national standards
  - Nearly 2,000 industrial standards
  - 323 quality and safety inspection centers at ministerial level have been built
  - 1,780 quality inspection agencies at provincial, municipality and county level have been built
  - Since 2001, The Ministry of Agriculture has tested 1,500 samples of aquatic products in its regular surveillance program
  - That a survey found that the quality eligibility rate of aquatic products in 22 cities was 99.4 percent in terms of Chloramphenicol.

**Overview: some recent trade bans imposed on Chinese seafood**

| Start year | Originator | Scope | End year |
|---|---|---|---|
| 2002 | EU, EU-wide ban after tests found traces of chloramphenicol | Shrimp and crayfish | 2004 |
| 2006 | Taiwan after tests found carciogens | Hairy mitten crab | ---- |
| 2007 | Wal*Mart after tests found antibiotic contamination | Catfish | ---- |
| 2007 | US after tests found antibiotics contamination | Shrimp, basa, catfish | ---- |
| 2007 | Russia | All fish from China | ---- |

**Guidelines of the 11th Five Year Plan for food production monitoring**

| | |
|---|---|
| 1 | Enhancing development of risk assessment system. |
| 2 | Development of agricultural standardization system. |
| 3 | Accelerating development of inspection and testing system. |
| 4 | Facilitating brand-building in agricultural production. |
| 5 | Capacity-building for whole-chain regulation. |
| 6 | Development of emergency response system |
| 7 | Capacity-building in science and technology services. |

# Chinese Seafood Industry - Processing

03.

Supply of raw material catch / culture ▶ **Processing primary / secondary** ▶ Distribution trading / import & export ▶ Consumption trends / species

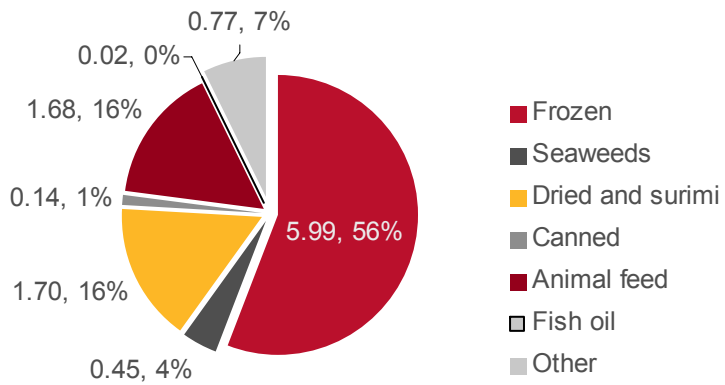
# The development of seafood processing in China

## Fresh with little processing for the domestic market – frozen imports for processing and then re-export

- Traditionally, aquatic products are most commonly sold fresh in the Chinese domestic market. In 1999, total processed aquatic products amounted to 6.2 million MT, accounting for only 15.1 per cent of total aquatic production.
- However, in recent years seafood processing has seen significant growth in China.
- The Chinese Ministry of Agriculture reported that in 2004 the total number of aquatic processing facilities in China was 8,745, an increase from 8,287 in 2003.
- Some focus has been on over-capacity in the Chinese processing industry, even though concrete estimates are hard to come by.
- Given the expansion of Chinese seafood trade, these concerns may be unfounded. Consider the following example for the 2003-2004 period:
  - In 2004, total processing capacity reached 14.2 million tons representing a 9 per cent increase from the previous year.
  - In the same year, 2004, 10.3 million tons were actually processed, an increase of 13.2 per cent from 2003.
  - Thus, in the period 2004-2003, actual processing increased at a faster rate than capacity and processing was therefore playing catch-up to capacity.
- The majority of processed aquatic products comes from seawater, which corresponds with the accelerating import of foreign seawater catch for processing and re-export out of China.
- The graph to the right shows how almost all seafood imports into China from Russia and the US are frozen. It is safe to assume that the majority of these imports were destined for processing and re-export.

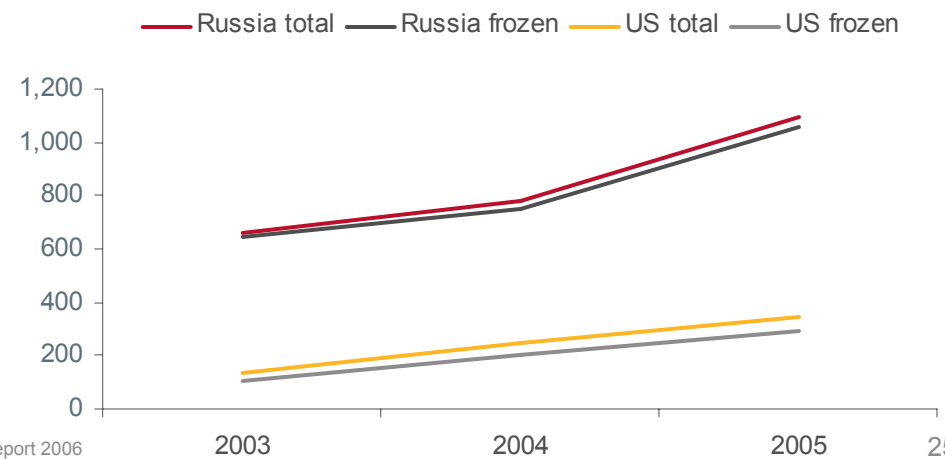
**2004 Main categories of processed seafood in China**

(In million tons)




**2003-2005 Imports of fish from Russia and USA**

(In thousand tons)




Source: USDA Foreign Agricultural Services GAIN Report 2006

# Seafood processing in China

## Processing for re-export has become a multi-billion dollar business

### Chinese imports of seafood can be separated into three main components:

1. Higher value fish for domestic consumption
2. Fishmeal to meet part of the need for the feed sector
3. Raw material for re-export

- Out of these three, by far the most important part is the third. Commonly re-exported items include fillets (e.g. pollock), shrimp, crab and other labor intensive processing species.
- Russia is a major supplier of raw material into China and the most common product is pollock for reprocessing.
- The northern ports of Dalian and Qingdao are the most important processing hubs and approximately 75% of all seafood imports come through there.
- Processing for re-export is further supported by a 100-percent tariff rebate, paid at the time of export.
- Estimates of the true-extent of Chinese processing trade for re-export are hard to make or come by because of statistical compilation problems and the drop in gross weight when raw material is turned into a finished product (e.g. fillets). However, many estimates put 60 to 75 per cent of seafood imports to China as destined for re-export

### China's accession to the WTO is contributing to the expansion of re-export

- China is well underway with the implementation of its commitments agreed under the accession to the WTO, which started in 2001 and is approaching full implementation.
- Besides enhancing overall trade in terms of improvement in regulations, transportation and logistics, day-to-day administration etc, there are two notable benefits of the WTO agreement to seafood trade
  1. Reduction of tariffs, see table below
  2. Enhanced soy bean import to China which can be used for feed
- For this reason, unruly import practices such as the commonly referred to "grey channel", the way many importers find methods to evade tariffs by shipping their goods via Hong Kong to China without the normal documented records, will be prevented to some extent.

### Selected tariff reductions by China following WTO membership

| Product | 2001 rate | Final rate |
|---|---|---|
| Frozen salmon | 16 | 10 |
| Frozen cod | 16 | 10 |
| Frozen fish fillets | 23.3 | 10 |
| Frozen shrimp (cooked & peeled) | 17.5 | 5 |
| Frozen shrimp | 19 | 8 |
| Frozen crabs | 23.3 | 10 |
| Fish meal | 2 | 2 |

Source: China's WTO Protocol of accession, 2001

# Chinese Seafood Industry – Distribution

04.

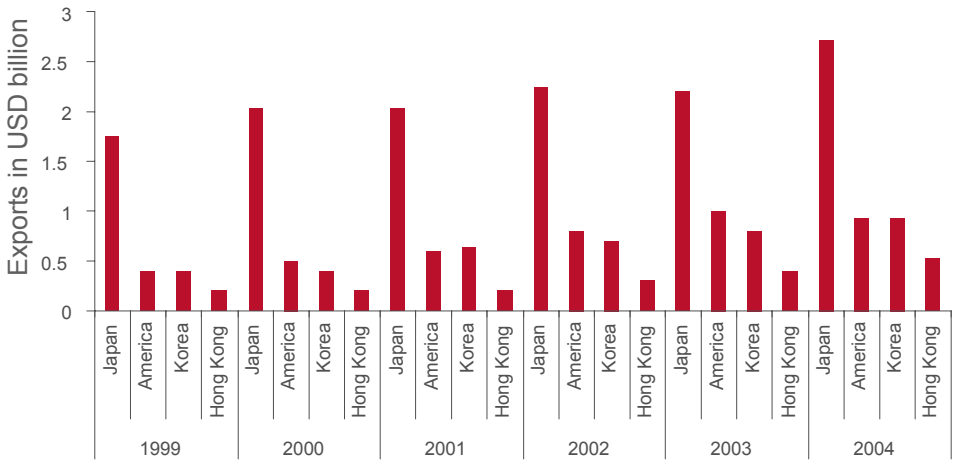
Supply of raw material catch / culture ▶ Processing primary / secondary ▶ Distribution trading / import & export ▶ Consumption trends / species

# China: World leader in exports of seafood produce

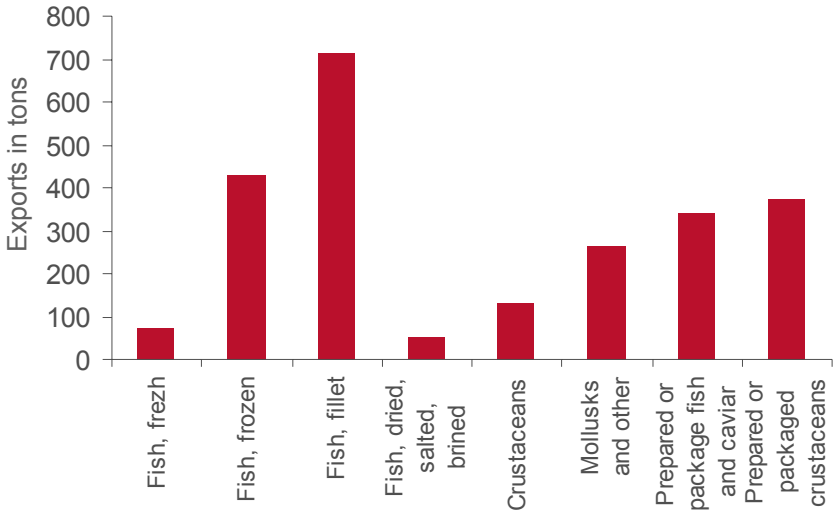
## Fish fillets the main export goods and Japan the main destination

- China's imports and exports of seafood have seen rapid development in recent years, with products such as shrimp and pollock as important export goods.
- Japan is a major export destination, talking up around half of all Chinese exports of seafood in recent years
- Fish fillets are the biggest volume item of seafood exports, reaching 715 thousand tons in 2005, a year-on-year growth of 18.6 per cent. In terms of value fillets also top the list with almost USD 2 billion in 2005, up 30.7 per cent.
- Prepared crustaceans and mollusks make up an almost equally big value with USD 1.8 billion, up 31.7 per cent.

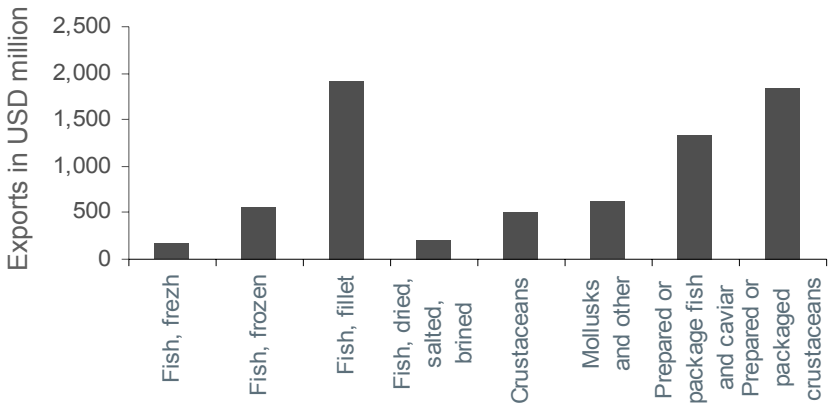
**1999-2004 Major export destination for Chinese seafood**




**2005 Types of seafood exports by volume**




**2004 Types of seafood exports by value**

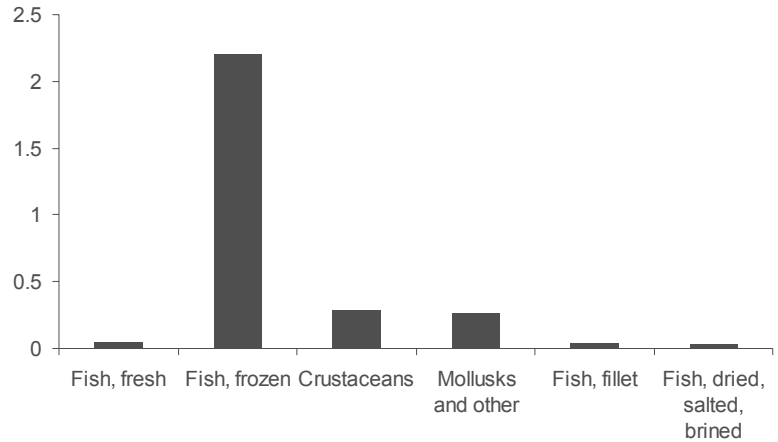



Source: USDA Foreign Agricultural Services GAIN Report 2006

# More imports with growing demand and re-export trade

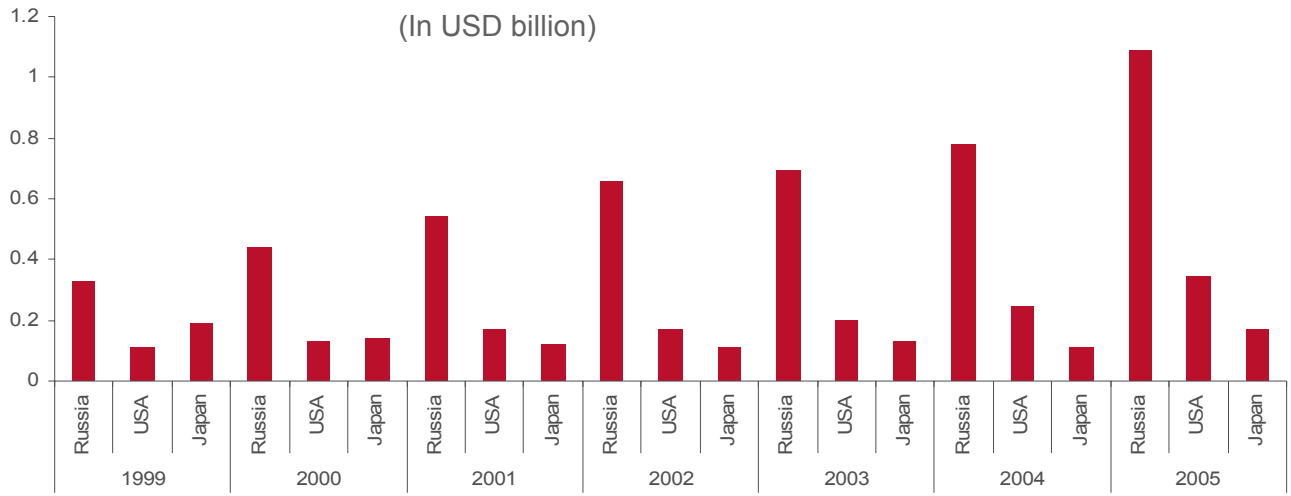
## Higher value seafood imports such as shrimp and abalone are at present the only significant imports into China, large majority is the frozen re-export trade

**2005 Types of seafood imports by value** (In USD billion)




**2005 China's seafood importing countries**

(In USD billion)




- China imported USD 3.2 billion worth of seafood in 2005, which compared to exports of USD 7.2 billion in the same year makes for a huge surplus.
- The main imports are frozen Alaska pollock and cod from Russia and fishmeal from Peru.
- China imported over USD 1 billion worth of fish from Russia in 2005.
- The main retail venues for seafood in China are wet markets and small food stores. However, a large share of imports is sold through supermarkets or high end hotel and restaurants.
- While frozen seafood holds the largest share of imports, there is a substantial market for live seafood in China and live imports are growing. High value varieties are brought in by air, the main points of entry are Beijing and Shanghai. Live seafood products imported to China include dungeness crab, oysters, lobster, and clams from Canada, rock lobsters from Australia and oysters from New Zealand.

Source: USDA Foreign Agricultural Services GAIN Report 2006

# Trends in the domestic food market

## Towards big and fast

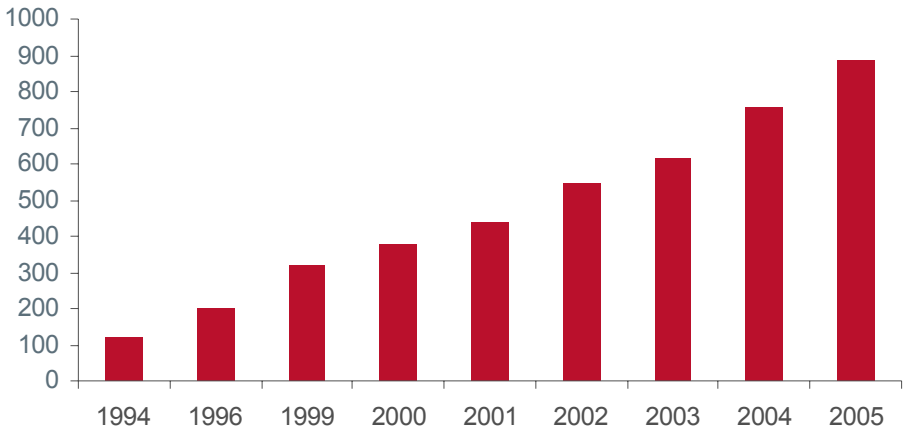
- The scares of food safety in China are not only felt in the countries that import food from China, but at home as well.
- Partially influenced by food scares, the general trend is away from the wet markets and smaller food stores towards supermarkets and megastores.
- Restaurant culture and spending are also thriving, with fast food chains growing rapidly across the country.
- The success of KFC in China is notable, benefitting from the general preference towards poultry among Chinese consumers.
- KFC recently introduced a line of fish burgers and fish fingers in all its mainland China outlets. Three main characteristics can be noted about this expansion:
  - Expansion from one Chinese favorite; poultry, to another; seafood
  - Hedging against extreme drops in sales in case of a big outbreak of Bird Flu.
  - Health conscious choice.

| Fast Food Chain Outlets as of first half of 2005 | |
|---|---|
| KFC | 1,584 |
| Starbucks | 180 |
| MacDonald's | 760 |
| Pizza Hut | 201 |

Source: China Economic Review: China by numbers2007

**1994-2005 Development of restaurant spending**

(In RMB million)




Source: China Economic Review: China by numbers2007

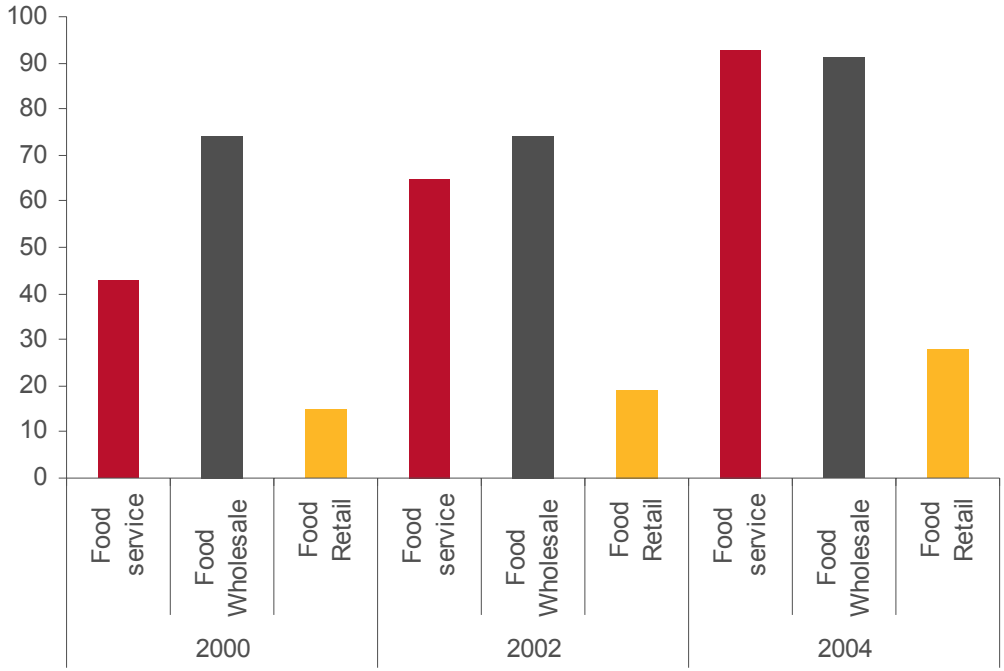
# Food service and wholesale are growing fast

## At the expense of small scale food retail

- With a booming economy and a process of modernization in all spheres of society, lifestyles become fast paced and foodservice outlets and fast food chains multiply.
- The rise of the food wholesale sector can be attributed to the sudden emergence of large-scale supermarkets and megastores, such as Carrefour and Wal*Mart, which have both had to alter their shop floors to accommodate a diverse and mostly live seafood selection.
- Chinese wholesalers are competing for a handsome market share with their foreign counterparts.
- Small scale food retailers such as the local grocer and the wet markets are seen as losing market share.

**2000-2004 Food service, wholesale and retail in China by value**

(In USD million)




Source: National Bureau of Statistics of China

# Chinese Seafood Industry - Consumption

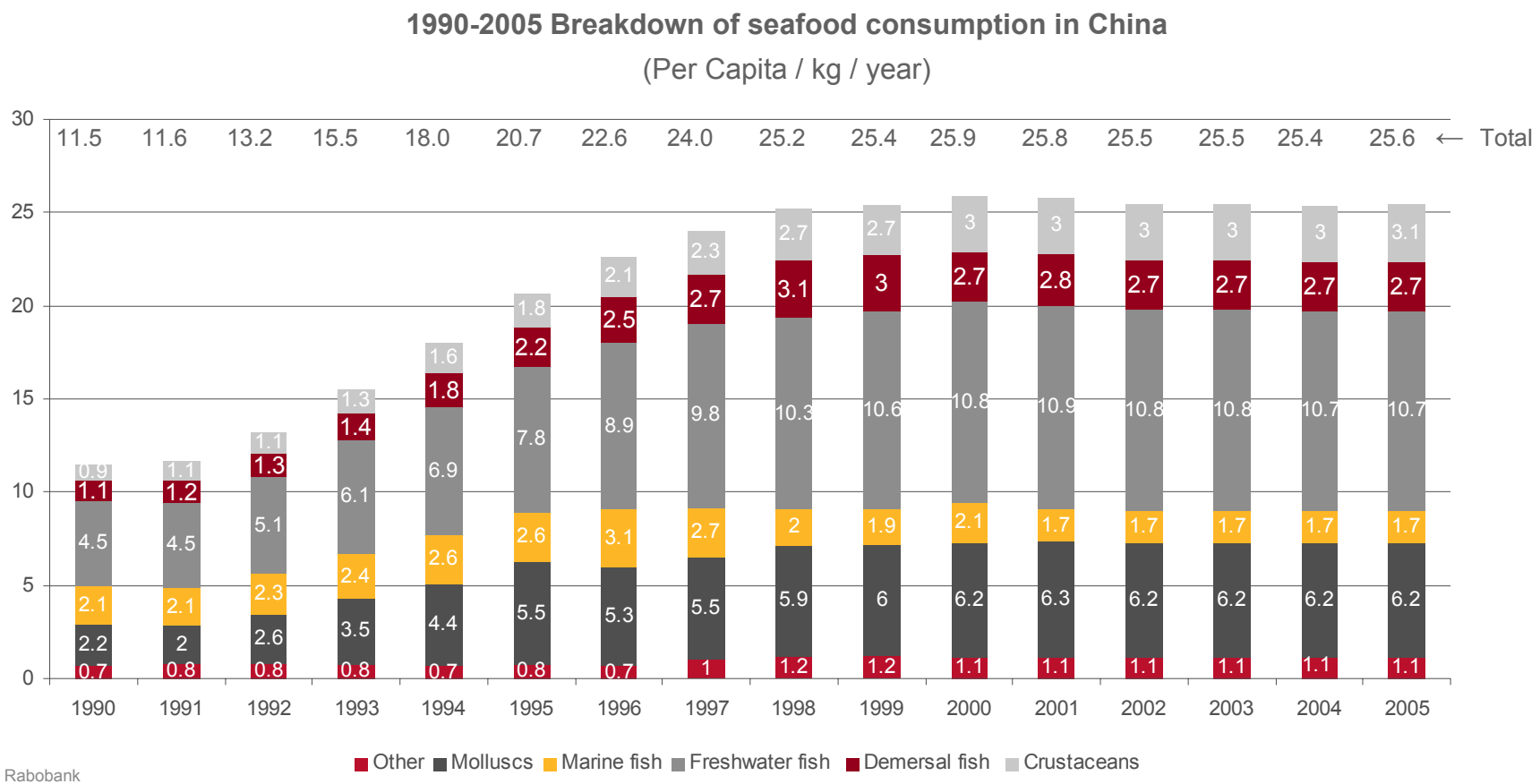
05.

Supply of raw material catch / culture ▶ Processing primary / secondary ▶ Distribution trading / import & export ▶ Consumption trends / species

# High consumption of seafood

## 25.6 kg per capita in 2005

- Seafood consumption in China grew at a high rate between 1990-1998.
- Out of all continents, Asia is the region with the highest per capita consumption of fish.
- Freshwater fish and mollusks dominate consumption in China.




Source: FAO, Rabobank

# High value seafood consumption will continue to grow

## The rise of the middle class will lead to more and higher-value seafood consumption

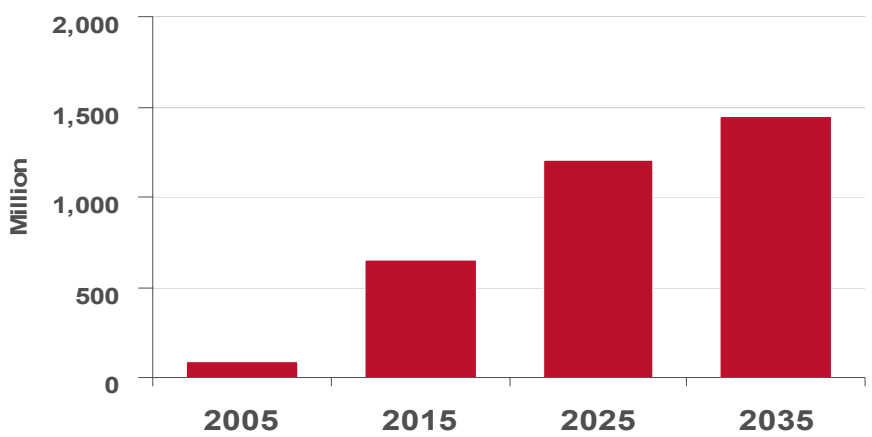
### The declared goal of the Chinese government is to create an all around harmonious well-off society

- China's  middle classes is estimated to be 1.5 billion people by 2035, which would be large majority of the population at the time.
- The Chinese government is more ambitious and wants to achieve something similar by 2020.
- Given the popularity and status of seafood in Chinese daily life, one can assume that seafood producers can expect increased

### China is expected to satisfy most of its rising demand

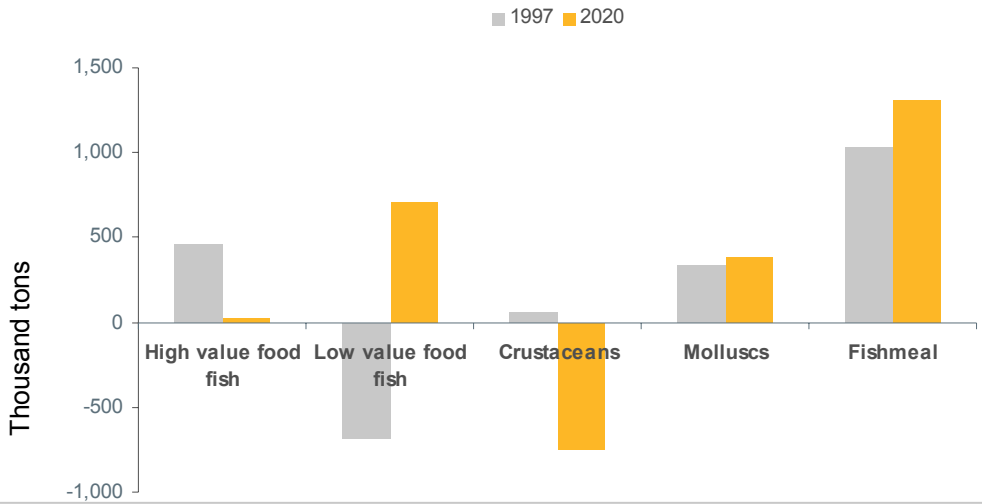
- China is the leading producer of seafood in the world and has the biggest domestic seafood market in the world in terms of volume.
- A prediction for the future of Chinese production shows that China can depend on itself to satisfy growing demand in terms of volume and to a lesser extent in terms of value.
- The prediction below reflects China's ability to supply the domestic market. A rise in the imports of crustaceans such as shrimp is expected.
- China is the world leader in the culturing of shrimp, so an external supply rather suggests the tremendous popularity of crustaceans than China's lack of ability to satisfy that demand.

**Prediction of population rising to the middles classes in China**




**Prediction of the changing structure of seafood supply in 2020**

(Prediction: IFPRI, in thousand tons)




Source: Goldman Sachs, IFPRI

# Strong fundamentals of Chinese seafood consumption

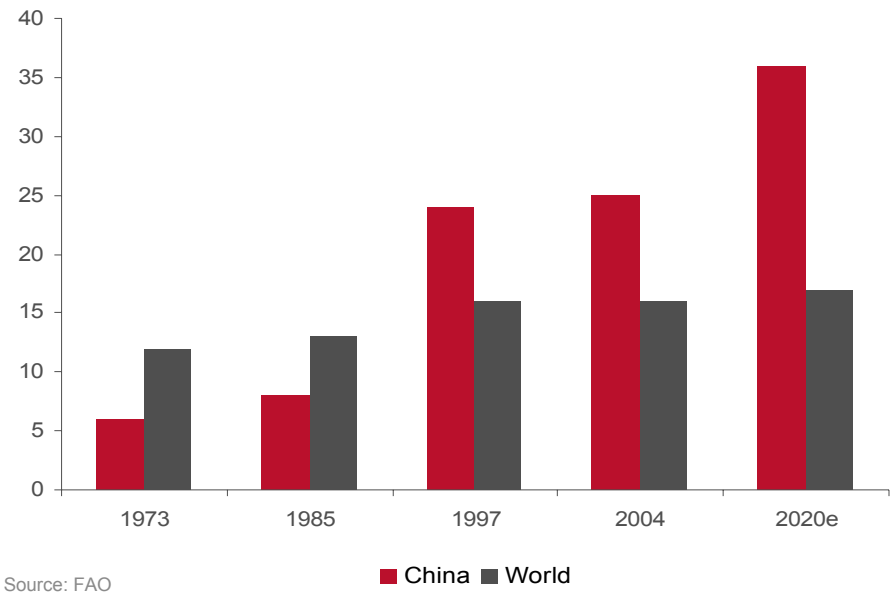
## Chinese consumers eat more seafood than the world average

We expect a solid growth in seafood consumption in China over the next decade, particularly for high quality and high value varieties. The main reasons are:

- According to FAO, seafood consumption in China is expected to reach 35.9 kg/capita (DELETE per cent) in 2020, an increase of 41 per cent (DELETE as) compared to 2004
- A different shorter term forecast by Goldman Sachs estimates seafood consumption to rise by 14 per cent in the next ten years.
- China's middle class is expected to grow dramatically in the next 5-10 years. In 2005, the middle class was about 90 million people. It is projected to be about 650 million in 2015. Increased purchasing power is likely to result in higher seafood consumption given the popularity of seafood in China.
- Chinese consumers are in general sensitive to product quality. Demand for high quality seafood is therefore expected to increase as purchasing power increases.

**1973-2020 Consumption prediction for Chinese Seafood**

(In kg / per capita)




Source: FAO

Source: FAO

# Chinese Seafood Industry Focus: Shrimp

06.

# Highlights: Chinese shrimp industry

- China is the largest producer of seafood in the world, representing some 35 per cent of the total in 2005. Its dominance in producing shrimp is equally impressive. Out of the 6.1 million tons of shrimp produced in 2005, China produced about 2.5 million tons or 41 per cent

- Consumption of shrimp in China has grown tenfold in the last ten years and we predict that the growth will continue

- One of the main reasons why the consumption of shrimp has grown so much, is the advances that have been made in the production of shrimp in China, where production costs have been brought down to levels unheard of before

- Another key reason is the introduction and rise of the *Litopenaeus Vanamei* species, which has in less than three decades become the dominant species in Chinese shrimp production

- other inter-related reasons for the robustness of the Chinese shrimp market are:
  - A tenfold increase in the domestic consumption of shrimp, whether as raw material for processing or for human consumption;
  - A significant increase in the share of processed shrimp for export

- China is expected to be able to supply most of the rising demand in the domestic market for seafood in. However, a rise in imports of crustaceans such as shrimp is expected.

- Therefore, the fact that the country will need to resort an imported supply suggests the tremendous predicted popularity of crustaceans rather than China's lack of ability to satisfy that demand

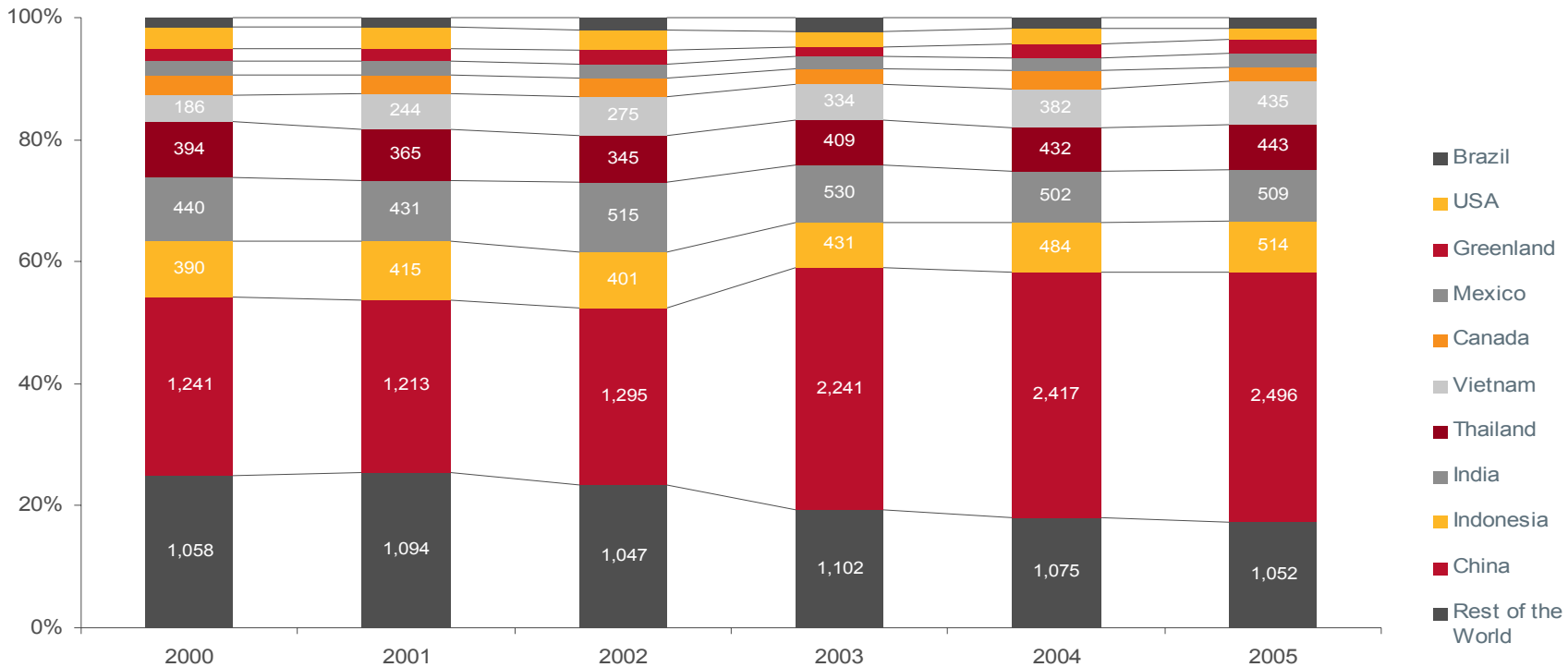
# Global production of shrimp

## China is bigger than the other four top producing countries combined

- Out of the 6.1 million tons of shrimp produced in 2005, China produced about 2.5 million tons or 41 per cent
- Indonesia, India and Thailand are all major producers of shrimp while Vietnam's share of total global production has been accelerating. The five Asian countries China, Indonesia, India, Thailand and Vietnam account for 72 per cent of total global production of shrimp.
- 2002-2003 saw a major boost in Chinese production of marine shrimp with total production growing by over 50 per cent. This is in part due to the commencement of registration of shrimp bred in inland waters.

**2000-2005 Top ten producers of shrimp and their share of total global production**

(Labels indicate tons, numbers for Vietnam in 2000 are estimated)

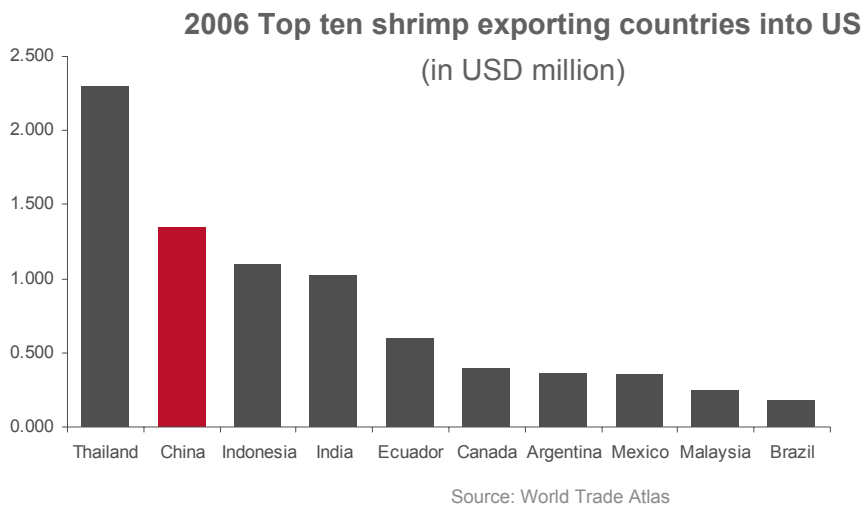



Source: FAO Ficis Database

# An export industry not living up to its potential

## Asian shrimp faces regulatory barriers to entry into major export markets

- Chinese and Asian shrimp in general, faces barriers to entry into major export markets in the form of tariffs, regulatory barriers and complete ban on import of shrimp from certain Asian countries
- After Thailand China is the second biggest exporter of shrimp into the US with USD 1.35 billion in 2006
- Out of the ten biggest exporters of shrimp to the US, 6 are Asian including the top 4
- Products from traditional suppliers such as Canada and Iceland are becoming rarer
- Considering China's comparative advantages in the production of shrimp, it stands a good chance to become the biggest foreign supplier of shrimp to the lucrative US market, if barriers to entry will be lowered
- This year the US banned all imports of shrimp from China, but Chinese aqua culturists could resume export to the US on a case-by-case basis



# 1996 – 2006: Output up and intensive processing up

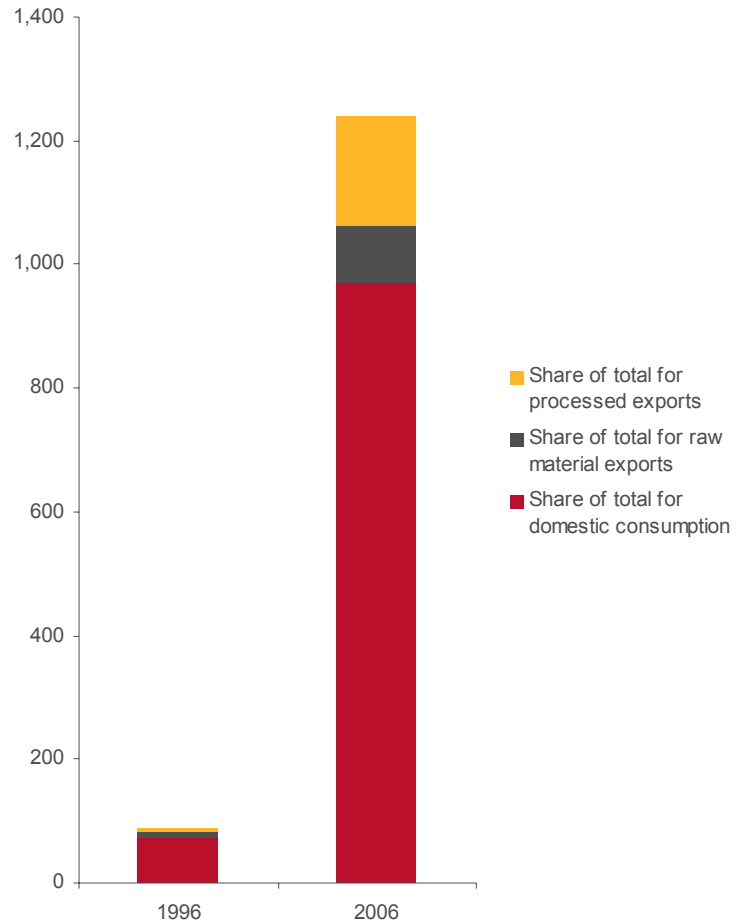
## A dual approach to understand the explosion of the Chinese shrimp industry

- Perhaps the most interesting element of the Chinese shrimp industry lies in the diagram to the right. It reflects three main trends:

  1. An explosion in Chinese shrimp output;
  2. A tenfold increase in the domestic consumption of shrimp
  3. A significant increase in the share of processed shrimp for export.

- As to the first observation, the revolutionizing of the Chinese shrimp industry is apparent in the growth from less than a 100 thousand tons in 1996, to more than 1,200 thousand tons in 2006. Note that the tonnage figures include both non-processed and processed shrimp for export and domestic consumption.
- As to the second observation, one can see that domestic consumption of shrimp is extensive and solid, and has grown tenfold over the last ten years. Taking into account the trade barriers Chinese shrimp exports run into, the industry has a good market at home which sustains a large majority of production.
- As to the third and last observation, formerly most exported shrimp from China was processed into tempura, sushi, finger food and other forms abroad. That process has turned around completely with 77 per cent of all exports being processed in China.

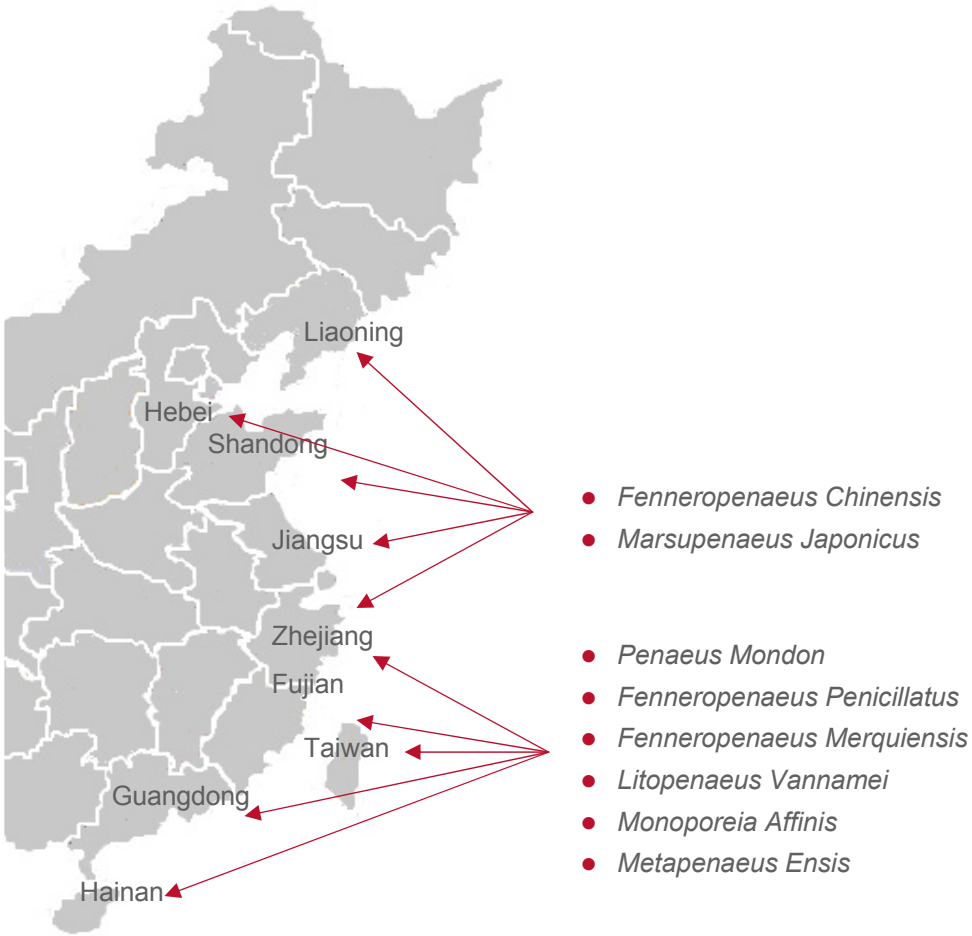
**1996 and 2006 market destinations**
**for non-processed export shrimp and processed shrimp**
(in thousand tons)




Source: Globefish, policy presentation, Xiao Fang

# Main species and farming areas

## Three to four out of ten commercially viable shrimp species stand out in China




- *Litopenaeus Vannamei*, (commonly known as Vannamei) introduced from America in 1988 has grown to become one of the most important species in commercial aquaculture in terms of yields and farming areas
- *Fenneropenaeus Chinensis* was once the most important species in Chinese aquaculture but its production was and still is limited
- *Penaeus Monoton* (also known as Black Tiger Shrimp) is farmed widely throughout Asia, where it is the most important traded aquaculture commodity in financial value
- *Marsupenaeus Japonicus* (also known as Kurama shrimp)

Source: World Aquaculture Society

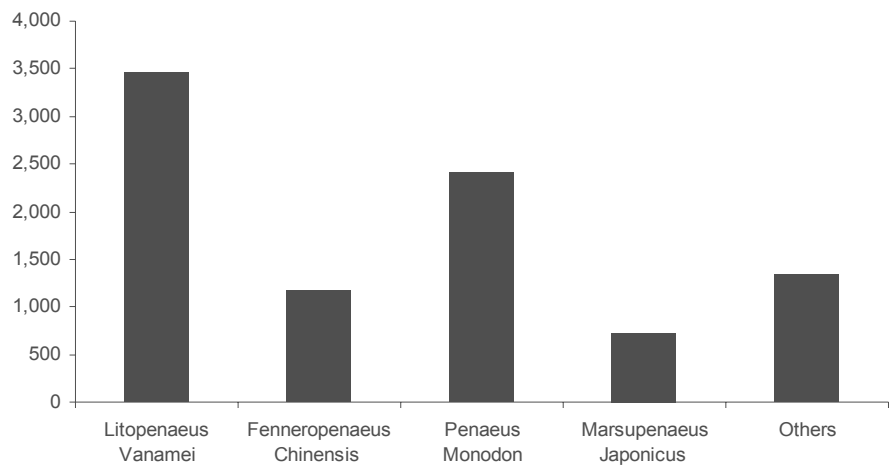
# Productivity: Vannamei works wonders

## Sharp increase in the South, drop in the North

- Large scale introduction of brood stock occurred in 1998 and in 2003, Vannamei accounted for a third of China's aquaculture shrimp output.
- Vannamei has worked wonders for the productivity of Chinese shrimp in terms of yield and use of farming areas.
- Shrimp farming has come to be concentrated in the warmer waters of the South, with output in the North actually dropping in terms of kg/ha.
- While productivity has halved in the North, it has almost doubled in the South.

**2003 Productivity by species of shrimp**

(In kg/ha)




### Northern China

| | Yield (ton) | Percentage | Area (ha) | Percentage | Unit Yield (kg / ha) |
|---|---|---|---|---|---|
| 1991 | 151,936 | 69.20% | 108,570 | 73.78% | 1,399.0 |
| 2003 | 99,876 | 20.26% | 131,824 | 54.25% | 757.6 |

### Southern China

| | Yield (ton) | Percentage | Area (ha) | Percentage | Unit Yield (kg / ha) |
|---|---|---|---|---|---|
| 1991 | 67,635 | 30.80% | 108,570 | 26.22% | 1,753.1 |
| 2003 | 393,185 | 79.74% | 111,185 | 45.75% | 3,536.3 |

Source: World Aquaculture Society

# Glitnir Seafood Stockwatch

07.

# Glitnir Seafood Stockwatch

GLITNIR

in cooperation with IntraFish

| EUROPE | | | | | | |
|---|---|---|---|---|---|---|
| **Company** | **Country** | **M.Cap USD m** | **Current share price** | **Change (%) in share price YTD** | **12m EV/EBITDA** | **12M P/E** |
| Marine Harvest | Norway | 3,423 | 5.4 | -7.4% | 13.1 | 18.1 |
| Austevoll Seafood Asa | Norway | 1,506 | 45.0 | 4.7% | 8.5 | 14.0 |
| Cermaq Asa | Norway | 1,427 | 85.0 | -7.6% | 8.8 | 12.4 |
| Leroy Seafood Group Asa | Norway | 1,138 | 117.0 | 3.5% | 11.4 | 24.0 |
| Pescanova Sa | Spain | 675 | 36.8 | 35.8% | 8.3 | 21.4 |
| Alfesca | Iceland | 603 | 6.4 | 28.9% | 10.3 | 16.6 |
| Biomar Holding A/S | Denmark | 442 | 212.0 | -14.5% | 10.9 | 9.7 |
| Aker Seafoods Asa | Norway | 370 | 42.0 | 36.4% | 10.5 | 24.0 |
| Nirefs Aquaculture Sa | Greece | 289 | 4.0 | 1.5% | 12.5 | 18.3 |
| Icelandic Group Hf | Iceland | 270 | 5.8 | -20.5% | 14.8 | 24.2 |
| **Europe Index** | | | | **101.8** | | |
| **Index, %change YTD** | | | | **1.8%** | | |
| **Index, %change from September 25** | | | | **-10.2%** | | |

Index: January 1, 2007 = 100

Sources: Bloomberg, Individual Stock Exchanges, Company Annual and Quarterly Reports Revenues, Glitnir. Data as of October 22, 2007, "nmf" = not meaningful, "n/a" = not available.

Disclaimer: The companies on the list have been selected by Glitnir. Glitnir banki hf. hereby disclaims liability and does not accept any responsibility for such information or is giving any advice in relation to investments in those companies.

# Glitnir Seafood Stockwatch

GLITNIR

in cooperation with IntraFish

| THE AMERICAS | | | | | | |
|---|---|---|---|---|---|---|
| **Company** | **Country** | **M.Cap USD m** | **Current share price** | **Change (%) in share price YTD** | **12m EV/EBITDA** | **12M P/E** |
| Copeinca Asa | Peru | 581 | 54.8 | 22.9% | 7.6 | 14.4 |
| Connors Brothers Income Fund | Canada | 415 | 8.1 | -22.9% | 11.0 | 8.8 |
| Sociedad Pesquera Coloso Sa | Chile | 398 | 1050.0 | 16.7% | 13.5 | 13.4 |
| Pesquera Itata Sa | Chile | 368 | 310.0 | 44.2% | 7.2 | 15.4 |
| Pesquera Iquique-Guanaye Sa | Chile | 273 | 39.0 | 55.4% | n/a | 9.7 |
| Clearwater Seafoods Inc Fund | Canada | 240 | 4.6 | -7.4% | n/a | nmf |
| Invetec Pesquera Mar De Chil | Chile | 224 | 495.0 | 5.0% | n/a | 14.9 |
| Fishery Products Ltd (Fpi) | Canada | 214 | 16.0 | 110.8% | 8.6 | 25.4 |
| Omega Protein Corp | US | 170 | 10.0 | 29.6% | 9.6 | nmf |
| High Liner Foods Inc | Canada | 106 | 10.3 | 17.1% | 9.4 | 22.8 |
| **Americas Index** | | | | **124.0** | | |
| **Index, %change YTD** | | | | **24.0%** | | |
| **Index, %change from September 25** | | | | **-3.9%** | | |

Index: January 1, 2007 = 100

Sources: Bloomberg, Individual Stock Exchanges, Company Annual and Quarterly Reports Revenues, Glitnir. Data as of October 22, 2007, "nmf" = not meaningful, "n/a" = not available.

Disclaimer: The companies on the list have been selected by Glitnir. Glitnir banki hf. hereby disclaims liability and does not accept any responsibility for such information or is giving any advice in relation to investments in those companies.

# Glitnir Seafood Stockwatch

GLITNIR

in cooperation with IntraFish

| ASIA | | | | | | |
|---|---|---|---|---|---|---|
| **Company** | **Country** | **M.Cap USD m** | **Current share price** | **Change (%) in share price YTD** | **12m EV/EBITDA** | **12M P/E** |
| Nippon Suisan Kaisha Ltd | Japan | 1,357 | 562.0 | -19.6% | 11.4 | 17.1 |
| China Fishery Group Ltd | China | 1,049 | 2.0 | 26.4% | 12.9 | 20.8 |
| Maruha Group Inc | Japan | 789 | 178.0 | -25.8% | n/a | n/a |
| Thai Union Frozen Prod Pub | Thailand | 653 | 23.9 | -4.4% | 8.5 | 9.7 |
| Pacific Andes Intl Hldg Ltd | China | 543 | 2.3 | 31.5% | 6.8 | 10.1 |
| Sea Horse Corp Pub Co Ltd | Thailand | 261 | 3.0 | -14.3% | n/a | n/a |
| Kyokuyo Co Ltd | Japan | 194 | 204.0 | -19.0% | 13.1 | 10.8 |
| Uoriki Co Ltd | Japan | 169 | 1326.0 | -4.8% | 11.9 | 22.9 |
| Chuo Gyorui Co Ltd | Japan | 122 | 325.0 | -10.7% | n/a | 11.6 |
| Nichiro Corp. | Japan | | Delisted September 25, 2007 | | | |
| **Asia Index** | | | | **97.2** | | |
| **Index, %change YTD** | | | | **-2.8%** | | |
| **Index, %change from September 25** | | | | **-0.8%** | | |

Index: January 1, 2007 = 100

Sources: Bloomberg, Individual Stock Exchanges, Company Annual and Quarterly Reports Revenues, Glitnir. Data as of October 22, 2007, "nmf" = not meaningful, "n/a" = not available.

Disclaimer: The companies on the list have been selected by Glitnir. Glitnir banki hf. hereby disclaims liability and does not accept any responsibility for such information or is giving any advice in relation to investments in those companies.

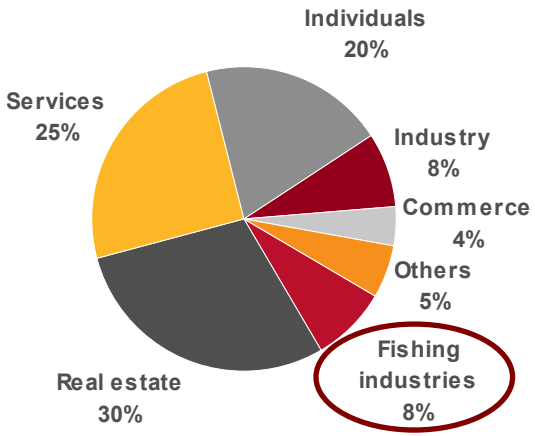
# Glitnir General Information

08.

# Introduction to Glitnir

- Home markets are Iceland and Norway
- Focus on niche segments worldwide
  - Seafood Industry, Sustainable Energy & Shipping – Offshore Service Vessels
- Strong focus on the seafood industry since 1904
- Today 8% of the bank's loan portfolio is in the seafood industry
- Credit ratings:
  - Aa3 / P-1 (Moody's), A / F1 (Fitch) and A-/A-2 (Standard and Poor's)

Glitnir's total loan portfolio $24 billion*




**Our services include:**

### Credit facilities

- Term loan facilities
- Working capital facilities
- Syndicated loans
- Vessel financing
- Bridge loans

### Capital markets

- Bond issuances
- FX dealings
- Forward contracts
- Options

### Mergers & acquisitions

- Financial advisory
- Acquisitions
- Disposals
- Minority investments
- MBOs / LBOs / MBIs
- Private Placements
- Strategic reviews

### Other services

- Risk management advisory
- Equity participation

* as of June 30, 2007

# Glitnir International Banking

GLITNIR

**Reykjavik, Iceland**
Glitnir Group, Headquarters

**Magnús Bjarnason.** Executive Vice President, International Banking

- Corporate Credit
- Corporate Finance
- Seafood Team

Address
Glitnir banki, International Banking
Kirkjusandi, 155 Reykjavik Iceland
Tel: +354 440 4519
Fax: +354 440 4520

**New York City, U.S.**
Glitnir Capital Corp.

**Jonathan Logan.** Managing Director Business Development U.S. & Canada

- Corporate Credit & Corporate Finance
- Support of Glitnir clients in the U.S. market
- Support of industry niche market teams, e.g. food/ seafood, sustainable energy & offshore service vessels.

Address
Glitnir Capital Corporation, 222 East 41st Street, New York NY 10017, U.S.
Tel: +1 212 922 0228
Fax: +1 212 922 0882
E-mail: jonathan.logan@glitnirusa.com

**Halifax, NS/ Canada**
Glitnir Representative Office Canada

**Joe Fillmore.** Chief Representative

- Promotion of Glitnir & its services conducted from Iceland
- Currently applying for turning office into a branch
- Support of industry niche market teams, e.g. food/ seafood, sustainable energy & offshore service vessels.

Address
1718 Argyle Street, Suite 810, Halifax, NS, B3J 3N6 Canada
Tel: +1 902 429 3114
Fax: +1 902 422 0288
E-mail: joe.fillmore@glitnir.is

**Shanghai, P.R. China**
Glitnir Representative Office China

**Zhu Jiang.** Chief Representative

- Promotion of Glitnir & its services conducted from Iceland
- Support of Glitnir clients in China
- Support of industry niche market teams, e.g. food/ seafood, sustainable energy & offshore service vessels.

Address
Glitnir Shanghai, Level 8, CitiGroup Tower, 33 Hua Yuan Shai Qiao Road, Pudong, Shanghai 200120, P.R. China
Tel: +86 21 5882 5088
Fax: +86 21 5882 5388
E-mail: jiang.zhu@glitnir.is

# Glitnir European Offices (I)

GLITNIR

**London, UK**
London Branch

- Business Management
- Debt Finance & Loan Syndication
- Leveraged Finance
- Corporate Finance
- Total Capital
- Funding
- Centre of Excellence: Food industry

Address

Glitnir London
7th floor, 41 Lothbury,
London EC2R 7HF
United Kingdom
Tel.: +44 (0) 20 7710 9100
Fax.: +44 (0) 20 7710 9101

**Luxembourg**
Glitnir Bank Luxemburg S.A.

- Corporate Banking
- Centre of Excellence
  - Real Estate
- Private Banking
- Capital Markets

Address

Glitnir Bank Luxembourg S.A.,
534, rue de Neudorf, L-2220 Luxembourg
Mailing Address: P.O. Box 1647, L-1016 Luxembourg
Tel.: +352 266 864-1
Fax: +352 266 864- 64

**Copenhagen, Denmark**
Copenhagen Branch

- Corporate Banking (Seafood and Real Estate)
- Leveraged Finance
- Corporate Finance

Address

Glitnir Bank, Copenhagen Branch
Frederiksgade 19
DK-1265 Copenhagen, Denmark
Tel: +45 8833 5000
Fax: +45 8833 5001

**Norway**
Glitnir Bank

- Glitnir Bank
  - Corporate and retail mortgage
  - Full service bank, trad. indust.
  - Shipping/ Offshore service vessels
- Glitnir Factoring
- Glitnir Securities
- Glitnir Property Group
- BNbank
- Glitnir Privatøkonomi

Address

Dronningensgate 40; P.O. Box 282,
Sentrum; N-0103 Oslo, Norway
Tel: +47 22 82 56 90
Fax: +47 22 82 56 91

# Glitnir European Offices (II)

GLITNIR

**Reykjavik, Iceland**
Glitnir Group, Headquarters

- Corporate Banking
- Investment Banking
- Centres of Excellence
  - Global Seafood
  - Sustainable Energy
- Structured Finance
- Capital Markets

Address
Glitnir banki
Kirkjusandi, 155 Reykjavik Iceland
Tel: +354 440 4500
Fax: +354 440 4001

**Sweden**
Glitnir AB

- Glitnir Securities
  - Equity Trading & Brokerage
- FIM Kapitalförvaltning Ab, Finland Filial

Address
Hovslagargatan 3; Box 16027,
103 21 Stockholm, Sweden
Tel: +46 8 463 85 00
Fax: +46 8 611 64 05

**Finland**
Glitnir Corporation

- Funds
- Structured Products
- Asset Management
- Brokerage
- Investment Banking
- Glitnir Bank Ltd.
  - Banking (Oct.'07)

Address
Pohjoisesplanadi 33 A
00100 Helsinki, Finland
Tel. +358 (0)9 613 46 250
Fax. +358 (0)9 613 46 360

**Moscow, Russia**
CJSC Glitnir Securities and LLC
Glitnir Asset Management

- Funds
- Asset Management
- Brokerage
- Investment Banking

Address
Paveletskaya sq. 2, bldg 3
115054 Moscow, Russia
Tel. +7 495 545 0535
Fax +7 495 545 0536

# Glitnir Seafood Team

## Iceland

**Magnús Bjarnason**
Executive Vice President
International Banking
Direct line: +354 440 4523
Mobile: +354 844 4523
magnus.bjarnason@glitnir.is

**Helgi Anton Eiríksson**
Executive Vice President
Investment Banking
Direct line: +354 440 4518
Mobile: +354 844 4518
helgi.eiriksson@glitnir.is

**Guðmundur Hjaltason**
Executive Vice President
Corporate Banking
Direct line: +354 440 4515
Mobile: +354 844 4515
gudmundur.hjaltason@glitnir.is

**Bjarni Hjaltason**
Managing Director
International Banking
Direct line: +354 440 4788
Mobile: +354 844 4788
bjarni.hjaltason@glitnir.is

**Kristján Th. Davídsson**
Managing Director
Global Seafood – Intl. Banking
Direct line: +354 440 4517
Mobile: +354 844 4517
kristjan.davidsson@glitnir.is

**Ragnar Gudjónsson**
Director
Corporate Banking Iceland
Direct line: +354 440 4550
Mobile: +354 844 4550
ragnar.gudjonsson@glitnir.is

**Hjálmur Nordal**
Director
Corporate Banking Iceland
Direct line: +354 - 440 4522
Mobile: +354 - 844 4522
hjalmur.nordal@glitnir.is

**Ásmundur Gíslason**
Analyst I Seafood
Direct line: +354 440 4768
Mobile: +354 844 4768
asmundur.gislason@glitnir.is

**Valdimar Halldórsson**
Analyst
Direct line: +354 440 4638
Mobile: +354 844 4638
valdimar.halldorsson@glitnir.is

# Glitnir Seafood – Regional Teams

## North America

**Jonathan Logan**
Managing Director
North America
Mobile: +1 (203) 979 5275
jonathan.logan@glitnirbank.com

**Joe Fillmore**
Director
Canada
Direct: +1 (902) 429 3114
Mobile: +1 (902) 237 2114
joe.fillmore@glitnirbank.com

**Michael Richard**
Director
United States
Mobile: +1 (508) 878 0171
michael.richard@glitnirbank.com

## Asia

**Jiang Zhu**
Director
Glitnir Rep. Office China
Direct: +86 21 5882 5088
Mobile: +86 139 0161 1875
jiang.zhu@glitnirbank.com

**Hafliði Sævarsson**
Analyst
Glitnir Rep. Office China
Direct: +86 21 5882 5088
Mobile: +86 138 1807 2218
haflidi.saevarsson@glitnirbank.com

**Grace Liu**
Executive Assistant
Glitnir Rep. Office China
Direct: +86 21 5882 5088
Mobile: +86 136 6166 1660
grace.liu@glitnirbank.com

**Bjartur Logi Ye Shen**
Analyst
International Banking
Direct: +354 440 4560
Mobile: +354 844 4560
bjartur.shen@glitnir.is

**Eyþór Eyjólfsson**
Director – Japan and Oceania
International Banking
Direct: +354 440 4738
Mobile: +354 844 4738
eythor.eyjolfsson@glitnir.is

**Andre Lu**
Manager – Glitnir Bank
International Banking
Direct: +86 21 5882 5088
andre.lu@glitnirbank.com

**Ge Xin**
Analyst – Glitnir Bank
International Banking
Direct: +86 21 5882 5088
xin.ge@glitnirbank.com

**Ge Xin**
Receptionist – Glitnir Bank
International Banking
Direct: +86 21 5882 5088
sabrina.sun@glitnirbank.com

# Glitnir Seafood – Regional Teams

## Europe/Nordic

**Kjartan Ólafsson**
Director
Glitnir Securities - Norway
Direct: +47 2287 8613
Mobile: +47 9592 6015
kjartan.olafsson@glitnir.no

**Henning Lund**
Analyst
Glitnir Securities - Norway
Direct: +47 2201 6347
Mobile: +47 9525 5839
henning.lund@glitnir.no

**Ola Övrelid**
Bank Executive
Glitnir Bank - Norway
Direct: +47 7010 2026
Mobile: +47 9133 6733
ola.oevrelid@glitnir.no

**Kristján Hjaltason**
Director
Glitnir Bank - Denmark
Direct: +45 - 8833 5081
Mobile: +45 - 5199 5081
kristjan.hjaltason@glitnir.dk

**Glenn Kristiansen**
Director
Glitnir Securities - Norway
Direct: +47 - 2201 6392
Mobile: +47 – 9117 9105
glenn.kristiansen@glitnir.no

**Kurt Kvalsvik**
Director
Glitnir Bank - Norway
Direct: +47 7010 2015
Mobile: +47 – 9480 9016
kurt.kvalsvik@glitnir.no

## South America

**Jón Garðar Guðmundsson**
Managing Director
Emerging Markets
Direct: +354 440 4516
Mobile: +354 844 4516
jon.gudmundsson@glitnir.is

**Hjörtur Thor Steindórsson**
Credit Manager
International Corporate Credit
Direct: +354 440 4503
Mobile: +354 844 4503
hjortur.steindorsson@glitnir.is

**Sverrir Ingi Ármannsson**
Analyst
International Banking
Direct: +354 440 4528
Mobile: +354 844 4528
sverrir.armannsson@glitnir.is

**Guðjón Sverrisson**
Senior Credit Manager
International Banking
Direct: +1 212 71 60 105
Mobile: + 646 696 86 55
gudjon.sverrisson@glitnirbank.com

# Glitnir Seafood Team – Other Members

**Timothy H. Spanos**
Executive Director
International Corporate Credit
Direct line: +354 440 4777
Mobile: +354 844 4777
timothy.spanos@glitnir.is

**Tim Owen**
Executive Director
Head of Corporate Finance, UK
Direct line: +44(0) 20 7710 9130
Mobile: +44(0) 7843 512 092
tim.owen@glitnir.is

**Viðar Kárason**
Analyst
Glitnir Denmark
Direct line: +45 8833 5082
Mobile: +45 5199 5082
vidar.karason@glitnir.dk

**Gísli Sigurgeirsson**
Senior Manager
International Corporate Credit
Direct line: +1 212 716 0107
Mobile: +1 917 355 0057
gisli.sigurgeirsson@glitnirusa.com

**Atli Rafn Björnsson**
Director
Corporate Finance
Direct line: +354 440 4739
Mobile: +354 844 4739
atli.bjornsson@glitnir.co.uk

**Ingi Rafnar Júlíusson**
Executive Director
Capital Markets
Direct line: +354 440 4459
Mobile: +354 844 4459
ingi.juliusson@glitnir.is

**Snorri Arnar Vidarsson**
Credit Officer
Corporate Banking Iceland
Direct line: +354 440 4771
Mobile: +354 844 4771
snorri.vidarsson@glitnir.is

**Davíð Stefánsson**
Analyst
Corporate Finance, UK
Direct line: +44(0) 20 7710 9136
Mobile: +44(0) 788 795 4877
david.stefansson@glitnir.is

**Kyrre Dale**
Credit Manager | Glitnir Bank
Seafood Credit, Norway
Direct line: +47 7011 2034
Mobile: +47 9137 6551
kyrre.dale@glitnir.no

**Rúnar Jónsson**
FX Brokerage
Capital Markets
Direct line: +354 440 4489
Mobile: +354 844 4489
runar.jonsson@glitnir.is

**Stefán Eiríks Stefánsson**
FX Brokerage
Capital Markets
Direct line: +354 440 4483
Mobile: +354 844 4483
stefan.stefansson@glitnir.is

**Merete Stokke Nesdal**
Account Manager | Glitnir Bank
Seafood Credit, Norway
Direct line: +47 7010 2016
Mobile: +47 926 67 511
merete.stokke.nesdal@glitnir.no

# Legal Disclaimer

All opinions and analyses represent the views of Glitnir at the time of writing and are subject to change without notice. Glitnir and its employees cannot be held responsible for any trading conducted on the basis of the information and views presented here. Glitnir may at any time have vested interests in individual companies, for example as an investor, creditor or service provider, but its opinions and analyses are produced independently by the Glitnir Research division, based on publicly available information on the company in question.

This Seafood Industry Report was written by

Hafliði Sævarsson, Analyst – Glitnir Representative Office Shanghai haflidi.saevarsson@glitnirbank.com

www.glitnir.is/seafood

www.glitnir.is/stockwatch