

## INTERNATIONAL TRADE OF FISHERY PRODUCTS AND CO-OPERATION OPPORTUNITIES IN CHINESE FISHERIES

Xiang-guo Zhang , Shanghai Fisheries University, xgzhang@shfu.edu.cn

### ABSTRACT

China is a large developing country with 1.28 billion of population, per capita's income is continually increasing; the population is also increasing, so that the demand for human eatable consumption of fishery products is increasing significantly. During 1995 to 2001, the average annually increasing rate of per capita's GDP was 7.6% in China, while in Shanghai, that was 12.0% in the same period and the per capita's GDP was reached up to US\$ 5000 in 2002. In the recent years, more and more imported seafood have been appeared in the China's fish market. In 2002, China imported total about 2490 thousand MT of fishery products, among which 958 thousand MT was fishmeal and 936 thousand MT was imported for processing and then re-exported. Total of 600 thousand MT of directly eatable fishery products was imported and that was increased 200 thousand MT comparing previous year. China's both imported and exported fishery products were increased 7.6%, 21% and 6.8%, 12.1% by volume and value respectively in 2002 comparing previous year. In Chinese fishing industry, to improve post-harvest processing is seen as a way of developing the industry without increasing even decreasing harvests. As well as reducing losses through poor handling, improved processing can raise the value added of fish products and establish uses for otherwise discarded catch. And to improve the distribution of marine fish to inland areas, distant from the coast, is also important. China's accession to the WTO will undoubtedly speed up the standardization of international seafood trade and aquatic product market in China. China's seafood import and export will be expanded so as to meet the continuously increased need to high-value seafood for Chinese high-income residents. In 2002, for instance, Shanghai imported 719 MT of Fresh and chilled salmon, it was 12 times of that in 1999. The Chinese fisheries pay more attentions to strengthen the reciprocal complement with the fisheries of other countries and regions in the world. In fact, China has established the cooperative relationship in the field of fishery economy, technology, trade, and others with more than 60 countries or regions, and international organizations in the world.

**Keywords:** International Trade; Fisheries Products; Cooperation; Chinese Fisheries

Fishery products are a main source of protein in human's food consumption, it is also important to Chinese food consumption. In the last twenty five years, especially, Chinese fishery has gained so much development that the total volume of aquatic products has been rapidly increased, and the comprehensive production capability has been greatly strengthened in fisheries. Since the 80's of last century, the average annually increasing rate of fisheries harvesting has reached up to 8% by volume.

China is a large developing country with 1.28 billion of population, per capita's income is continually increasing; the population is also increasing, so that the demand for human eatable consumption of aquatic products is increasing significantly. In the recent years, more and more imported aquatic products have been appeared in the China's fish market also.

China has great potentialities to consume aquatic products; it can be taken for granted that China will become a larger fish market in the world.

## 1. Fisheries production in China

The production volume of Chinese fisheries has ranked the first one among the world fisheries countries since 1990. The total production volume of fishery products of China in 2002 has reached to 45.65 million MT, which was more than 7.5 folds of that in 1978, and the harvesting of aquaculture was increased 17.6 folds in the same period, so that in 2002, the ratio of aquaculture's volume was occupied 64% of total volume of fishery products in the country, but it was only 26% in 1978. The per capita occupation of aquatic products has been increasing yearly, and it was 36.0 Kg in 2002, up from 4.8 Kg in 1978.

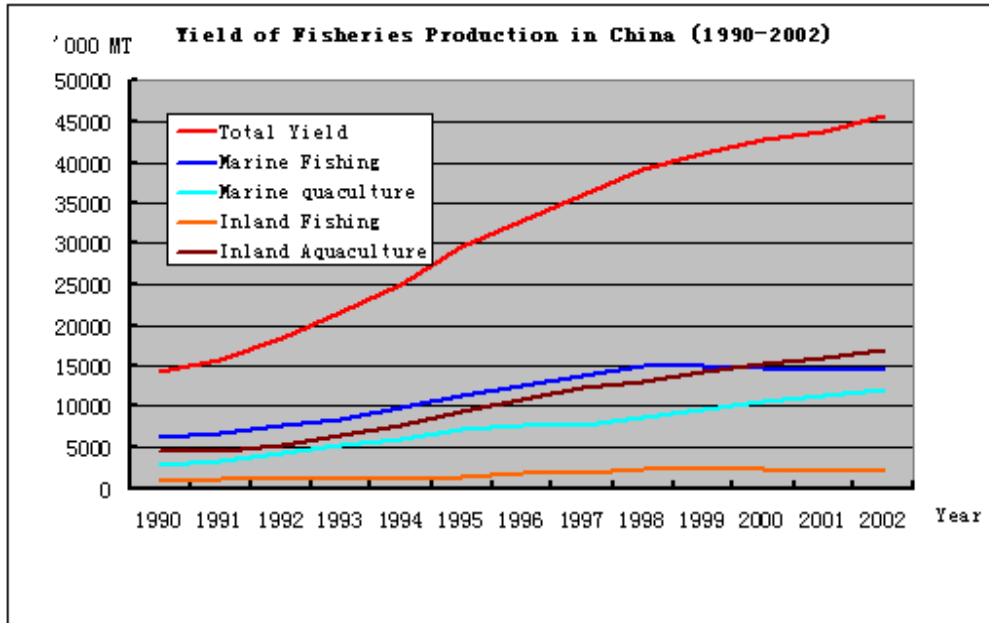


Fig.1 Yield of fisheries production in China (1990-2002)

In 2002, the annually increment of total national landing of aquatic products was 4.2%, while, it was as high as 7.2% in marine aquaculture. Marine aquaculture was more quickly increasing fishery in recent years.

It is estimated that the harvesting of Chinese domestic aquatic product will keep on growing up, but most of the increments will come from fresh water aquaculture and a few marine aquaculture. And because of the resources status and the need of protection of marine fish resources, improvement of Chinese capture fishing in the coastal waters area is impossible in near the future, and it is expected that the harvesting of high-value marine fin-fish will be continually reduced in Chinese capture fishing in the coastal water areas in the future.

Because of the constraints on nature environment, fishery recourses, aquatic products processing methods and industries investment, the constitution of harvesting in Chinese fisheries production has been changing. Comparing the harvesting volume in 2002 to that in 1999, the output of marine fin-fish was decreased 376 thousand MT, which the decreasing rate was -3.6%; the output volume of shellfish products was increased 1733 thousand MT, which the increasing rate was 18.1%; the output volume of shrimp and crab products was increased 327 thousand MT, which the increasing rate was 11.8%. As more, in order to protect the nature environment and make a appropriate utilizing the nature fishery resources, Chinese government has launched severe restraints on production of capture fisheries since 1999, it is

clear and obvious that the negative increment of the annually harvesting volume in marine and inland capture fishing will be continually in the near future in China.

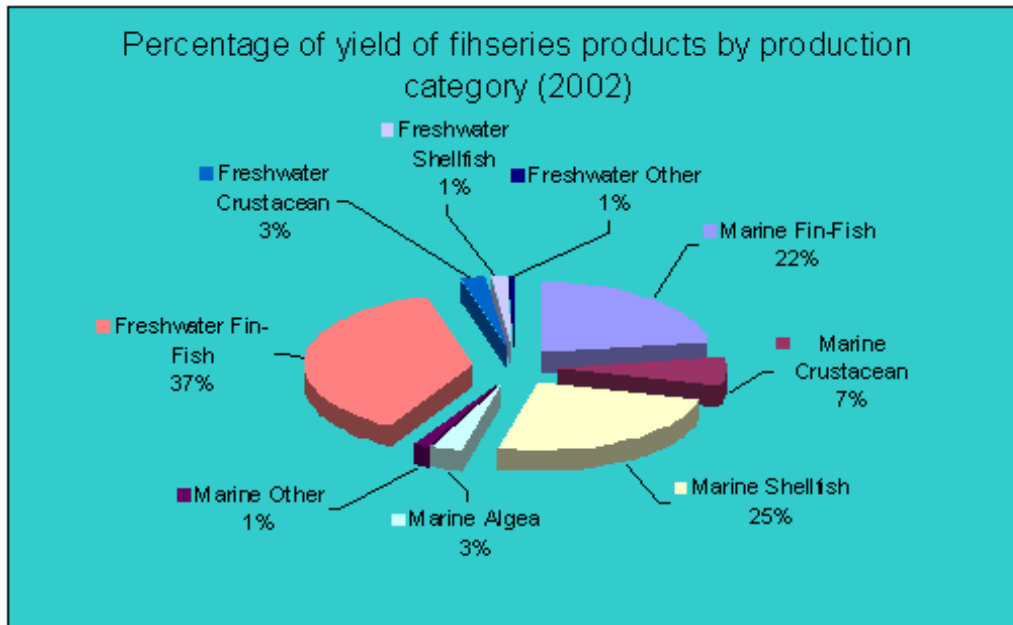


Fig.2 Percentage of yield of fisheries products by production category (2002)

In Chinese fishing industry, to improve post-harvest processing is seen as a way of developing the industry without increasing even decreasing harvests. As well as reducing losses through poor handling, improved processing can raise the value added of fish products and establish uses for otherwise discarded catch. And to improve the distribution of marine fish to inland areas, distant from the coast, is also important. This is one of a reason for developing freshwater aquaculture closed to markets, in the past in China.

## 2. Consumption of aquatic products in China

China is a developing country, which has a large population and wide land areas with great differences in nature environments. At present, the fisheries production is still greatly affected by nature environment's conditions. The consumption of aquatic products is affected by people's traditional customs, population constitution, resident' disposable income level, product's distribute channel and method and so on.

China has been adopted the Open Policy for more than twenty years, and there have gradually formed some different consumption groups among the aquatic products' consumers in mainland of China, because of the diversity of disposal incomes in different areas and different consumers. People are not satisfying with having some fish, but they like to choose different species and different quality level of aquatic products, according to their favor in individual consuming groups. Most of consumers begin to choose what should they consume, namely consumption is more based on the quality and species of aquatic products than before.

According to the household sampling survey in 500 families by the survey groups of Statistic Department of Shanghai in 2000, the annual average expenditure per capita in Shanghai was US\$ 1,072, which was increased 7.5% comparing previous year, and it was higher than that of disposable income, that means

average people's living standard was increasing. According the survey the citizens of Shanghai have paid more attentions to the increment of living quality than before. "Paid for health" has become an expenditure fashion for Shanghai residents, therefore expenditure per capita for health-care products, including food consuming was 55.8% more than that in previous year. Moreover, because of the diversity of residents' incomes, a multi-polar expenditure in citizens' consumption was obviously appeared. In 2000, among the 500 families have being asked, in which about 10% of the lowest income families had a lower level of consumption, annual average expenditure per capita was US\$ 649.6, while about 10% of the highest income families, annual average expenditure per capita was US\$ 1797.4. The average consumption value of the 10 % lowest income families was only equal to 36% of that in the 10% highest income families. More and more higher income's families have more opportunity to have meal in restaurant or outdoors, and they are consuming more expensive food. So there is increasing demand for high-value aquatic products and higher price with higher quality seafood, even some imported seafood, which is only little or never harvesting by domestic fishing fleet. With reinforcing open policy in Chinese economy system, especially in the western part of China, increasing disposal income per capita and improving citizen's living standards will be more rapidly in most part of China in near the future.

While per capita income level played an important role in determining a city's per capita expenditure on seafood, eating habits and easy access to seafood also affected expenditure levels.

Table 1. shows that different percentage of per capita expenditure of aquatic product to disposable income in 7 cities in 1997.

Name of cities	%
Shanghai	7
Guangzhou	4
Dalian	6
Qingdao	5
Beijing	2
Chengdu	1
Chongqing	1

Table 1 Percentage of per capita expenditure of aquatic product to disposable income in 7 cities in 1997

Residents in coastal cities, such as Shanghai, Guangzhou, Dalian and Qingdao, on average per capita to spend a larger percentage of their annual income on seafood than their counterparts in inland cities, such as Beijing, Chengdu, and Chongqing. In 1997, seafood expenditure as a percentage of annual income for residents in Shanghai, Guangzhou, Dalian and Qindao were 7 percent, 4 percent, 6 percent, and 5 percent respectively, compared to 2 percent for residents in Beijing, 1 percent for Chengdu, and 1 percent for Chongqing. (This is calculated by dividing the per capita expenditure on seafood in different cities by average annual per capita income of the city.)

(Unit of value is RMB Yuan, and one US dollar equals to about 8.27 RMB Yuan)

Area	1986	1997	1998		1999	
	Value	value	value	%*	value	%*
Town and city (per capita)		140.98	142.46	3.29	143.96	3.12
Rural area (per family)	15.48				21.62	

%\*: means percentage of annual consumption value of aquatic products to total expenditure for residents in cities and towns.

Table 2 The annually per capita average consumption value of aquatic products within whole country.

The annually per capita average consumption values of aquatic products within whole country were as shown in table 2.

The annually per capita average consumption value of aquatic products at home for different parts in China were as shown in table 3.

(Unit of value is RMB Yuan, and One US\$ equals to about 8.27 RMB Yuan)

Area	Population (the year of 2000)	% of population to total population in whole country (2000)	% Volume of Aquatic production (MT) (2000)	1986	1999	Increment (%)
Eastern part	0.514 (billion)	39.7	80	29.80	39.44	32
Middle part	0.482 (billion)	37.3	18	7.7	14.63	90
Western part	0.298 (billion)	23.0	2	3.80	7.54	98

Table 3 The annually per capita average consumption value of aquatic products at home for different parts in China.

The Eastern Part of China is a main traditional aquatic production area, and average per capita consuming volume at home has not increasing more in recent years, but they start to consume more higher value aquatic products out-door restaurants; however, in both Middle Part and Western Part of China, average per capita consumption of aquatic products at home were rapidly increasing in recent years, so that there will be a larger potential market for middle and lower value aquatic products.

In recent years, the species' constitutions of China's imported aquatic products have been changed very much. Chinese economy has been increasing rapidly for many years. In 2003, the annually growth rate of GDP in the country was as high as 7.8%, and the per capita GDP was US\$ 1000 in the Nation, while the per capita GDP has reached US\$ 5000 in some of east coastal cities such as Shanghai and Shenzhen, and there are more than 10 cities where the figures are higher than US\$ 4000. In some cities, which are located in the relatively developed region in the East part of China, such as Shanghai, Beijing, Guangzhou, Dalian and Qingdao, the resident's average disposal incomes per capita is continuously growing up. Moreover, there has a group with higher incomes accounting for 10% of the population in those cities, whose affairs of social activities are increasing and they are consuming aquatic products more frequently in outside-door restaurant. These people begin to consume more high-value aquatic products. Therefore, among the China's general imported aquatic products in 2002, the high-value aquatic products were occupied more than that in the past. For instance, the imported chilled fresh and frozen salmon was 45048 MT by volume, and US\$ 43.1 million by value, while it was only 706.6 MT and US\$ 2.1 million in 1999.

It is generally believed that the majority of consumers ate seafood at restaurants, although there was a growing trend for home consumption. Joint promotions with restaurants are considered to be an effective marketing tool in creating consumer awareness and generating interest on imported seafood. Promotional activities targeted at consumers could also help to increase consumer product knowledge and facilitate home consumption of seafood. Lack of home cooking recipes, and difficulties in preparing seafood dishes at home were considered to be important factors hindering home consumption of seafood.

### 3. International trade of aquatic products in China

In 1997 and 1998, with being of the eruption of Asia Financial Crisis, the affairs of international trade of China's aquatic products was influenced so greatly that the trade scale had once been sharply declined. With the recovering and developing of Asia economy situations, China's international trade of aquatic products has entered a new stage of rapidly increasing, after presenting a rise of recovery since 1999 both in volume and value.

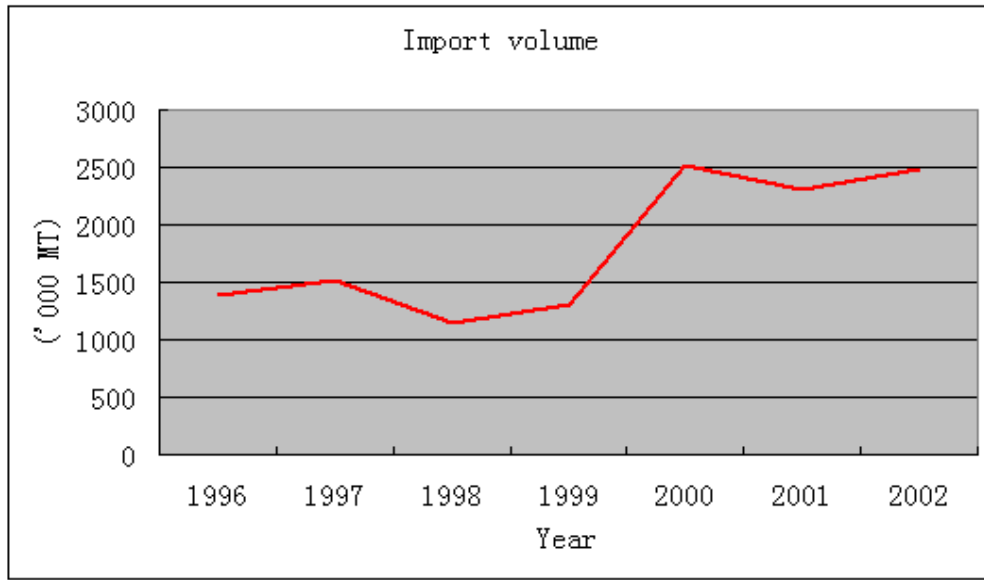


Fig. 3 Trace of changes in total imported volume of aquatic products in mainland of China.

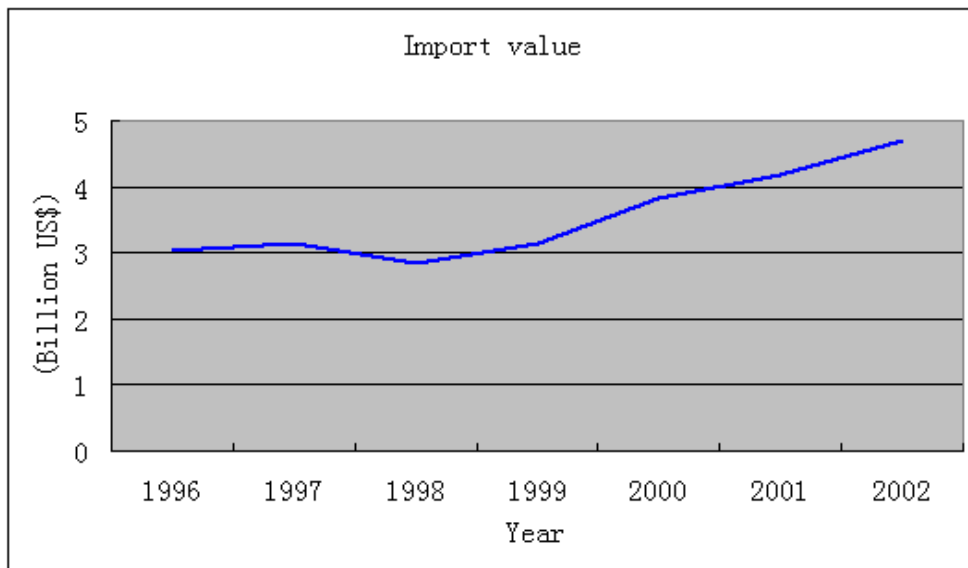


Fig. 4 Trace of changes in total imported value of aquatic products in mainland of China

According to a report of statistics by the office of Chinese Customs Administration, the volume of China's import and export in aquatic products was increased 7.2%, comparing that with pervious year, and reached to 4.58 million MT in 2002, up from 4.27 million MT in 2001, meanwhile the increasing rate was 14.7% and reached to US\$ 6.96 billion by value in 2002, up from US\$ 6.07 billion in 2001. The volume of imported aquatic products was 2.49 million MT, up from 2.31 million MT in 2001, which was increased 7.8%. The value of imported aquatic products was US\$ 2.27 billion, up from US\$ 1.88 billion, which was increased 20.7%.

In 2002, among the total value of exported aquatic products of China, it was occupied about 41% for being processed products. In the total processed and exported value of aquatic products, 36% of which were belongs to entrusting processed and re-exported products by foreign enterprises.

According to the investigation and study on the potential consumption and imported seafood wholesales in mainland of China, we consider that, at present, the consumption market of imported high-value seafood is still on the initial stage. Due to lack of the perceptual knowledge on the quality of imported high-value seafood, such as salmon, by the consumers and even by wholesales and retailers, consumers and wholesales are pay more attention to the species and price, rather than quality, of the seafood. So it is need to cultivate healthy seafood market quickly, to increase ability of recognizing high value seafood's quality, to enhance trust between consumers and sellers and wholesalers in mainland of China.

In 2001, the total value of import and export of aquatic products was US\$ 6.07 billion, up from US\$ 5.68 billion in 2000, which was increased 6.8%; and the total volume of that was 4.27 million MT, up from 4.06 million MT in 2000, which was increased 5.2%. In 2001, the total imported value of aquatic products was US\$ 1.88 billion, up from US\$ 1.85 billion, which was increased 1.6%; while, the total imported volume of that was 2.31 million MT, down from 2.52 million in 2000, which was decreased - 8.3%. , which means to import more high value aquatic products than before. In 2001, the total volume of imported fishmeal was 0.902 million MT, down from 1.186 million MT in 2000, which was decreased 0.284 million MT, and was decreased 23.9%. The total volume of imported non-fishmeal aquatic products was 1.412 million MT in 2001; and 1.334 million MT in 2000, which was increased 5.8%. The average price of imported aquatic products was US\$ 810, which was increased 10.5% than that of previous year:

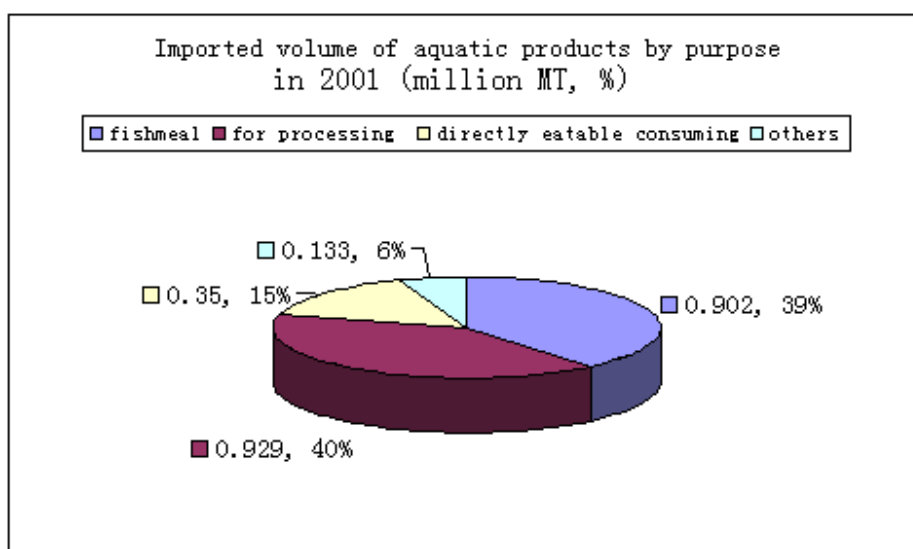


Fig. 5 Imported volume of aquatic products by purpose in 2001

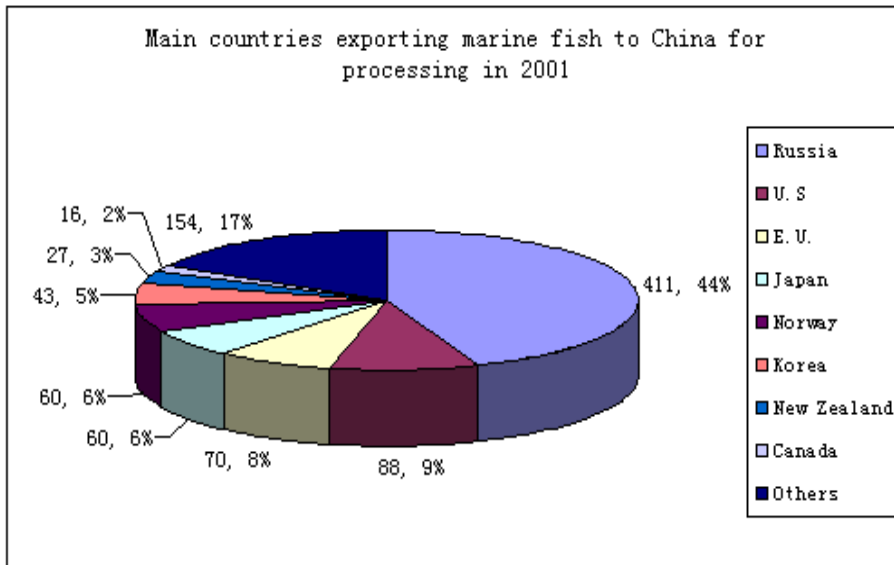


Fig.6 Main countries exporting marine fish to China for processing in 2001.

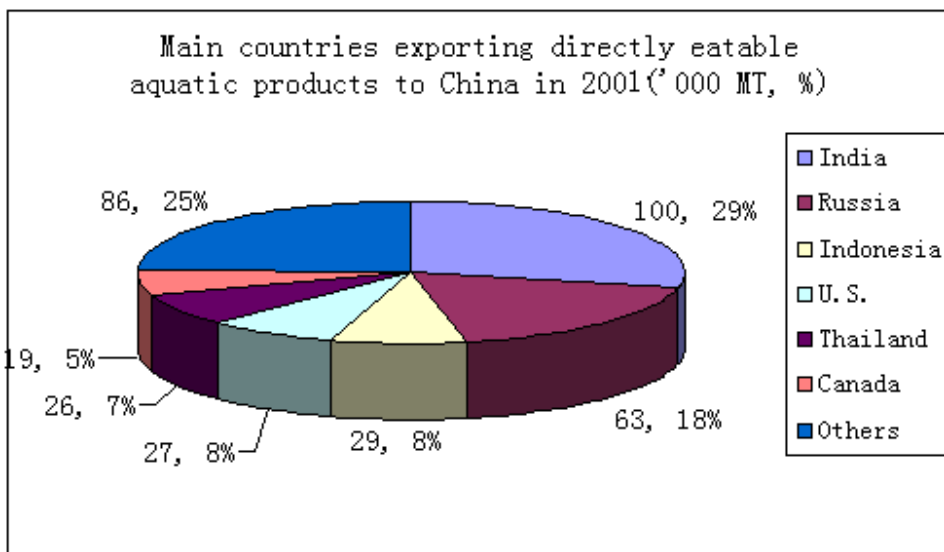


Fig. 7 Main countries exporting directly eatable aquatic products to China in 2001.

#### 4. Impact of China's WTO Accession on Seafood Marketing in China

According to World Trade Organization (WTO) Agreement, China will reduce its tariff on seafood imports, and final average of 10.6 percent by January 1st, 2005.

In addition to tariff reductions, China has also agreed to grant trading and distribution rights to foreign companies. Currently foreign companies are not allowed to import seafood into China except for re-export processing. Foreign companies are also prohibited from distributing imported seafood or providing



related services. Under the WTO Agreement, China will permit foreign companies to engage in seafood trade and distribution.

Chinese seafood processors, concentrated in the main coastal cities, would also face increased competition from foreign processors. As most Chinese seafood processors are engaged in labor intensive re-export processing it would be difficult for them to compete in the domestic market with foreign processors that have better production technology, greater efficiency.

China's seafood import value and volume continued to grow in 2003, suggesting a growing preference for better quality products and high value species. Seafood consumption continued to be concentrated in large urban cities such as Shanghai, Guangzhou, and Beijing where average incomes were higher. Eating habits also played an instrumental role in determining seafood consumption levels of residents in different cities, resulting in significant differences in per capita seafood consumption among inland and coastal cities.

China's accession to the WTO will undoubtedly speed up the standardization of international seafood trade and aquatic product market in China. China's seafood import and export will be expanded so as to meet the continuously increased need to high-value seafood for Chinese high-income residents. For instance, although the aquatic product consumption per capita in Shanghai is about 60% of that in Hong Kong, and the population in Shanghai is 2.47 times of that in Hong Kong, but the imported chilled fresh salmon in Shanghai in 1999 was only 60 MT, while that in Hong Kong was 5500 MT. In 2002, however, Shanghai imported 719 MT of Fresh and chilled salmon, it was 12 times of that in 1999. It is undoubted that same trend will appear or has appeared in Beijing, Guangdong province and other East Regions of China.

From now on, caused by increasing of Chinese population and the consumption per capita, the total increments of imported middle and high-value seafood will surpass that of other countries in the world. The China's accession to WTO will make help to expand the international trade between China and other countries, to improve the species constitution of seafood conflicts between domestic seafood supply and demand.

## **5. Conclusion**

China is a large developing country, and the capita income may be expected to continually increase, and the population will also be increasing, so that demand for human eatable consumption of aquatic products is going to be certain to increase significantly.

The Chinese fisheries pay more attentions to strengthen the reciprocal complement with the fisheries of other countries and regions in the world. In fact, China has established the cooperative relationship in the field of fishery economy, technology, trade, and others with more than 60 countries or regions, and international organizations in the world.

Chinese government should develop more cooperative relations with more countries which including the fishery's products trade and technical exchange, the mutual investment, the introduction of advanced technology and management experience in order to jointly promote the fishery development in the world and in China also.