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## Chile

### Fishery Products

### Annual Report

### 2004

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**Report Highlights:**

As a result of a decline in Chile's salmon and trout production, exports of whole eviscerated salmon fell in 2003 after many years of constant growth. In the coming years the industry will continue to expand, but exports of whole eviscerated salmon will grow at a much slower rate, as demand shifts to value added products.

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## Executive Summary

Salmon and trout (Salmonid) production are the main components of Chile's edible fisheries sector. Exports were valued at \$1.15 billion in calendar year 2003, representing 5.6 percent of Chile's total export revenues for both Agricultural and Non-Agricultural products. A further expansion is expected in 2004, as prices of exported salmon and trout products have increased significantly. Total Chilean aquaculture output will continue to grow based on development and growth of salmon, trout and new species like turbot. Total exports in 2004 are expected to reach US\$ 1.3 billion. Exports of value-added salmon and trout products are expected to expand at a faster rate than whole eviscerated salmon. The export share of these processed products has increased from 5 percent in 1990 to 67 percent of the total export value in 2003.

Note: A Fisheries Products Strategic Indicators Table will not be provided, as Chile does not import salmon products and is only a marginal importer of total edible fish products.

## Production

Output of whole eviscerated salmon fell slightly in 2003, after many years of significant expansion. Salmon producers in an effort to reverse the decline in export prices observed in 2001 and 2002, agreed to reduce output. Due to this cut back in production, prices recuperated significantly during 2003. As a result, economic returns expanded 18% for the whole salmon and trout industry to a record US\$1.15 billion in 2003. For MY2004 and the coming years, the industry predicts that production of whole eviscerated salmon will expand for at least 15% each year. However, the long term export forecast for whole eviscerated salmon is much more moderate, as demand is expected to shift to value-added salmon products.

Atlantic and Silver (Coho) salmon are the main species produced in Chile, with marginal numbers of King and Cherry salmons. In MY2003, over 77 percent of total salmon production was of the Atlantic species, with Coho salmon representing the remaining 22 percent of total production. Atlantic salmon have an average harvest weight of 4 - 5 kg, while Silver (Coho) Salmon average 3 - 4 kg, and King and Cherry Salmon average 3 - 5 kg. Atlantic Salmon reach this weight in 10 - 24 months in the ocean, while Silver Salmon spend an average of 8 months in fresh water followed by 10 - 12 months in the ocean.

Chile's excellent natural conditions promote efficient, low-cost salmon production year around. Ideal water temperatures, which fluctuate from 7 to 16 degrees Celsius in the southern fresh water lakes of Region Ten, and in the ocean south of Puerto Montt, have contributed to the industry's success. Since the lakes and fjords in these regions do not freeze during the winter months, the salmon grow faster and reach commercial sizes 6 - 12 months earlier than in Norway, the world's leading producer. This provides a significant economic advantage over competitors. Additionally, the cost of land, facilities and labor are low in these regions. Ample supplies of relatively inexpensive, high quality fish meal and fish oil (the principal feed inputs) further support the profitability of the sector in that feed comprises 60 percent of the total cost of production. Most of the feed used by Chilean salmon producers is manufactured domestically, using the most advanced production and processing technology available.

Based on these natural comparative advantages, Chile's salmon and trout production and exports are expected to expand further in the coming years, provided there are no unforeseen sanitary problems or extreme exchange rate fluctuations. Chile produces and exports a variety of salmon products, including fresh/chilled, frozen, canned, dried and salted, smoked and dehydrated salmon. Although the most important component of the

sector is fresh/chilled and frozen whole/eviscerated salmon, exports of value-added salmon products are increasing at a fast rate.

The Chilean salmon and trout industry is composed of more than 70 companies, most of which are located in Regions Ten, Eleven and Twelve employing directly and indirectly over 45,000 workers of which 60 percent are women,. Aquaculture is conducted in 234 coastal concessions for which the companies pay user fees to the government . In year 2010, yearly exports are expected to reach a level of 2.25 billion dollars.

### **Consumption**

There are no official statistics for fresh/chilled domestic consumption in Chile; figures given in the PS&D are based on information provided by Salmon Chile, the salmon and trout producers association. The significant increase shown in MY2003 in the PS&D table is the result of new information made available by that association. Although domestic consumption of both farmed and "wild" salmon has been increasing during the last few years, it is not a significant portion of total demand. This is primarily due to the fact that in Chile fish in general is less popular than red meat and poultry.

Supermarket chains buy directly from the producers or, in some cases, internally source the product from their own salmon farms. Up to now there has not been comprehensive promotional campaigns to increase domestic consumption, because Chile's salmon producers have been focused mainly on the export market.

### **Prices**

The average export price for whole eviscerated fresh/chilled and frozen salmon increased in 2003, from \$2.25/Kg. in 2002 to \$2.91/Kg. in 2003. Nevertheless, total export value of whole eviscerated fresh and frozen salmon fell from \$256 million in 2002 to \$245 million in 2003, due to the salmon producers decision to cut back supplies by 25%.

### **Trade**

Based on a fall in salmon output and an expansion in exports of value added products, exports of eviscerated salmon fell significantly in MY2003. In the coming years, whole eviscerated salmon exports are expected to grow again, but at a slower rate than in the past, as exports of value-added salmon and trout products expand as producers seek higher profits. Industry sources have indicated that since transport costs have increased significantly and Chile is comparatively farther away than other producers from the main consumption markets, producers will increase the effort to produce a larger percentage of value added products which will reduce the volume of exports but increase the value. Exports of value-added salmon and trout products, such as fresh and frozen filet, smoked, dried & salted or canned, increased another 24 percent in value during MY2003.

Approximately 90 percent of Chile's whole eviscerated salmon production in volume is exported to Japan, Brazil and the United States. More than 47 percent of total salmon and trout exports were destined to the U. S. (valued at US\$ 544 million), whereas 37 percent were destined for Japan (valued at US\$ 427 million). Almost all Pacific salmon (Coho) and trout are frozen and exported to Japan, mostly via ocean freight. Atlantic salmon is normally marketed fresh/chilled and transported via airfreight to markets in the United States, and in smaller amounts to Europe and Latin America. Chile is presently the main salmon supplier in

the U.S. with slightly over 48 percent of total imports for farmed and ranched salmon, followed by Canada with a 41 percent share.

In recent years the salmon industry has invested in processing plants to produce more value-added products, like smoked salmon. Exports of these products represented just 5 percent of total exports in 1990, but now represent 67 percent of total exports.

| <b>Table 1: CHILE - Exports of Value-Added Salmon and Trout Products</b> |                |                |                |                |                |
|--------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| (US\$ Thousand)                                                          |                |                |                |                |                |
| Product                                                                  | 1999           | 2000           | 2001           | 2002           | 2003           |
| Fresh Filet                                                              | 203,774        | 278,470        | 280,119        | 300,336        | 353,347        |
| Frozen Filet                                                             | 119,063        | 170,826        | 201,443        | 197,407        | 216,596        |
| Smoked                                                                   | 12,995         | 19,399         | 20,149         | 28,925         | 30,852         |
| Dried & Salted                                                           | 17,516         | 18,665         | 14,876         | 15,185         | 18,087         |
| Canned                                                                   | 7,798          | 8,441          | 7,240          | 7,057          | 22,699         |
| Other                                                                    | 29,070         | 49,881         | 52,875         | 72,01          | 128,734        |
| <b>Total</b>                                                             | <b>390,216</b> | <b>545,682</b> | <b>576,702</b> | <b>620,927</b> | <b>770,315</b> |
| % of Total Salmon Exports                                                | 47.7           | 56.1           | 59.8           | 63.8           | 67.2           |

Source: Salmon Producers Association.

### Other Uses

Other Use/Loss figures in the PS&D table corresponds to the value-added production of "fillet and meat" and other types of value added products like smoked, dried and salted or canned. This figure is the residual of total salmon production (which includes "whole eviscerated") and the export figure, plus an estimate for domestic consumption. The table above is based on value of exports, as opposed to the PS&D, which is based on volume.

### Stocks

Producers and/or exporters keep no stocks of fresh chilled and frozen salmon.

### Policy

The Chilean government provides no domestic support on subsidies for salmon and trout production.

The Chilean salmon industry had another health related problems in 2003 in the Netherlands this time, based on the reported presence of malaquite green, a prohibited substance, used to control algae in nets. The use of malaquite green was banned in Chile's salmon farming industry in early 2002.

In an effort to prevent new health related incidents, the Government is devoting more resources to Sernapesca (National Fishery Service) to strengthen the Residue Control Program. Additionally, as there are new approved vaccines being used, the industry expects to lower the quantities of antibiotics administered to salmon and trout.

### Marketing

Chilean, U.S. and Canadian salmon producers formed a multilateral association called Salmon of the Americas (SOTA), based in Miami, with the main objective of promoting agreements among the main actors in the industry and increasing per capita consumption in the U.S. market. Canadian and Chilean producers supply 90 percent of the consumption in the United States.

| PS&D Table           |                           |                     |                     |                     |                     |                     |         |
|----------------------|---------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
| Country              | Chile                     |                     |                     |                     |                     |                     |         |
| Commodity            | Salmon, Whole/Eviscerated |                     |                     |                     |                     |                     |         |
|                      | 2003                      | Revised             | 2004                | Estimate            | 2005                | Forecast            | UOM     |
|                      | USDA Official [Old]       | Post Estimate [New] | USDA Official [Old] | Post Estimate [New] | USDA Official [Old] | Post Estimate [New] |         |
| Market Year Begin    |                           | 01/2003             |                     | 01/2004             |                     | 01/2005             | MM/YYYY |
| Beginning Stocks     | 0                         | 0                   | 0                   | 0                   | 0                   | 0                   | (MT)    |
| Total Production     | 354000                    | 348930              | 370000              | 405000              | 0                   | 460000              | (MT)    |
| Intra-EC Imports     | 0                         | 0                   | 0                   | 0                   | 0                   | 0                   | (MT)    |
| Other Imports        | 0                         | 0                   | 0                   | 0                   | 0                   | 0                   | (MT)    |
| TOTAL Imports        | 0                         | 0                   | 0                   | 0                   | 0                   | 0                   | (MT)    |
| TOTAL SUPPLY         | 354000                    | 348930              | 370000              | 405000              | 0                   | 460000              | (MT)    |
| Intra-EC Exports     | 0                         | 0                   | 0                   | 0                   | 0                   | 0                   | (MT)    |
| Other Exports        | 115500                    | 84660               | 121000              | 94000               | 0                   | 104000              | (MT)    |
| TOTAL Exports        | 115500                    | 84660               | 121000              | 94000               | 0                   | 104000              | (MT)    |
| Domestic Consumption | 1800                      | 2860                | 1800                | 2860                | 0                   | 2860                | (MT)    |
| Other Use/Loss       | 236700                    | 261410              | 247200              | 308140              | 0                   | 353140              | (MT)    |
| TOTAL Utilization    | 238500                    | 264270              | 249000              | 311000              | 0                   | 356000              | (MT)    |
| Ending Stocks        | 0                         | 0                   | 0                   | 0                   | 0                   | 0                   | (MT)    |
| TOTAL DISTRIBUTION   | 354000                    | 348930              | 370000              | 405000              | 0                   | 460000              | (MT)    |

| <b>Export Trade Matrix</b> |                                  |               |             |
|----------------------------|----------------------------------|---------------|-------------|
| <b>Country</b>             | <b>Chile</b>                     |               |             |
| <b>Commodity</b>           | <b>Salmon, Whole/Eviscerated</b> |               |             |
| <b>Time Period</b>         | <b>Jan-Dec</b>                   | <b>Units:</b> | <b>M.T.</b> |
| <b>Exports for:</b>        | <b>2002</b>                      |               | <b>2003</b> |
| U.S.                       | 6215                             | U.S.          | 5318        |
| <b>Others</b>              |                                  | <b>Others</b> |             |
| Japan                      | 85389                            | Japan         | 62489       |
| Brazil                     | 9307                             | Brazil        | 8106        |
| Taiwan                     | 3087                             | China         | 1836        |
| China                      | 2342                             | Taiwan        | 1315        |
| Thailand                   | 1039                             | Argentina     | 1279        |
| Venezuela                  | 907                              | So. Korea     | 736         |
| Argentina                  | 694                              | Lithuania     | 509         |
| Spain                      | 621                              | Thailand      | 489         |
| Estonia                    | 516                              | Russia        | 375         |
| Russia                     | 425                              | Mexico        | 370         |
| <b>Total for Others</b>    | 104327                           |               | 77504       |
| <b>Others not Listed</b>   | 3591                             |               | 1837        |
| <b>Grand Total</b>         | 114133                           |               | 84659       |