

Recovering World Leadership In Salmon

**Scenario Planning:**  
**DEVELOPING A STRATEGY  
FOR THE FUTURE  
OF THE  
ALASKA SALMON INDUSTRY**

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September 1993

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## INTRODUCTION

The Alaska salmon industry is at a crossroads. All participants in the industry face a very uncertain future. That uncertainty makes the required investments necessary to move forward more risky. In an attempt to reduce that risk by providing a better understanding of what the salmon market might look like in the future, the Alaska Department of Commerce and Economic Development, the President's Office of University of Alaska and the Alaska Sea Grant Program sponsored a salmon industry strategy workshop earlier this year. This report describes that workshop.

The strategy workshop team consisted of 17 individuals with a wide variety of expertise and perspectives on the Alaska salmon industry including fishermen, processors, and economists as well as the Director of the Commercial Fishing Division of the Alaska Department of Fish and Game and the Commissioner of the Alaska Department of Commerce and Economic Development. ( A complete list can be found in the appendix.) The two-day scenario planning session was facilitated by Global Business Network, consultants to some of the nation's largest and most successful corporations. The group met April 15 and 16 in Anchorage, Alaska.

The purpose of the workshop was for representatives of all sectors of the industry to determine the range of alternative, plausible scenarios that would describe the future of the Alaskan salmon industry and to develop appropriate strategies. Responding as an industry rather than as fragmented components is a key factor in developing an effective strategy. This report includes a description of the scenario planning process, the main issues identified by the scenario team, the scenarios themselves, and key strategies developed by the group.

## USING SCENARIO PLANNING

Scenarios are stories or "plots" about how the future might unfold. They are designed to decrease uncertainty about the future and help industry participants make decisions today with an understanding about how they might turn out tomorrow. The best use of scenarios is the development and testing of strategies and decisions. By asking and answering the question "*what if...?*," the unfolding scenarios become what wind tunnels are to new airplane designs: instructive simulations of operating conditions. It's hoped that in taking this long view, the Alaska salmon industry may recapture its competitive edge.

Historically, the salmon industry has been fragmented and often unable to communicate constructively. Scenarios provide a common vocabulary and a shared vision of the future that should help members of the industry focus on common problems and respond more strategically to current events.

Finally, scenario thinking holds that there is no single future -- that there are many possibilities, and that the future which emerges is shaped by what we do. This way of thinking moves strategic activity away from prediction and reaction, to vision and pro-action, so that the future which does emerge is one industry participants help create.

The group's work culminated in the development of six scenarios. In each case, the scenario is first presented as a description of what happens in that possible future, followed by the indicators or road signs that would signal the emergence of that scenario as we proceed into the future. The group also identified actions that could be taken by the state and by industry to head-off or promote changes described in individual scenarios.

The scenarios range from an optimistic future where salmon farming "fizzles," to a gloomy future where Alaskan salmon fail to return. These two scenarios, *Farming Fizzles* and *Lost at Sea* are considered wild cards. The remaining four scenarios, framed by these two wild cards, represent more plausible futures. These are *Pinbone Wizard*, *Red Hot Chile*, *Russian Roulette* and *Sayonara Baby*.

It is significant that the group could foresee only one optimistic future for the salmon industry. Since this would require a large-scale disaster to hit the farmed salmon industry, the group regarded it as only a remote possibility. That all the most plausible futures for the Alaska salmon industry are ones with grim

outcomes suggests that dynamic, concerted action is urgently needed by the industry as a whole.

### **CURRENT CONDITIONS FACING THE SALMON INDUSTRY**

Once armed with an understanding of how to use the scenario planning process, the group discussed what forces have shaped current conditions. All participants in the workshop agreed that not only are current conditions bad, but they threaten to get worse.

When the Magnuson Act was implemented in 1976, it extended the national border to 200 miles and prohibited foreign fleets from harvesting salmon on the high seas that border Alaska. Japanese fleets were particularly hard hit by the prohibition. No longer able to harvest Alaskan salmon on the high seas, they had to purchase salmon causing Japanese imports of salmon to triple. At that time, Alaska was the primary source of world salmon causing prices here to climb. That trend peaked in the late 1980's and, coupled with increased value of the yen, led to astronomical salmon prices in 1988. Since then things have changed.

Since passage of the Magnuson Act, world salmon supplies have tripled from 365,000 metric tons to 1.2 million metric tons. Competitors in Chile, Russia, Norway, and Japan have increased their market shares to the detriment of Alaskan product. Production by salmon farmers has gone from 0% of the world market share to 33%. Since the early 1980's, Alaska's global market share has fallen from 40% to 31%. By the end of the century world salmon supplies are projected to increase further with salmon farmers expected to make continued healthy market share gains.

Not only has increased supply had an adverse affect on prices, but worldwide demand conditions have changed. Canned salmon has become increasingly obsolete to younger generations and there is a strong preference for convenience-style foods. Though domestic per capita consumption of salmon has increased since 1987 from .5 lbs. to 1.2 lbs., most of that increased consumption has been of farmed salmon. Imports of farmed salmon into the U.S. during that period have jumped from 13,000 metric tons to 43,000 metric tons despite import prohibitions of Norwegian farmed salmon. Alaska's stronghold in the domestic market place continues to be canned salmon, but sales have remained flat

despite the large drop in ex-vessel value. Also the world's largest seafood consumers, the Japanese, have decreased seafood consumption in favor of beef and other protein alternatives which have become increasingly affordable. Japanese consumers have also increasingly accepted farmed salmon and trout as an alternative to traditional sockeye preference.

Farmed salmon has set the standards for quality, consistency and availability; standards difficult to match in the short and intense seasons required to harvest Alaska's wild salmon.

Despite these dramatic changes in the world market place, the Alaska salmon industry has changed little in recent decades. More than 90% of all salmon leaves the state in a can or as a headed and gutted product ill suited to compete with the standards set by farmed salmon. Inefficiencies in the harvesting, transport and processing of salmon make it increasingly difficult for Alaskan salmon to compete cost effectively on the world market. Conditions that allowed the Alaskan salmon industry to escape change in the past have altered substantially in recent years.

*Using market information gleaned from state and federal agencies including the U.S. Department of Commerce, the Alaska Dept., of Commerce and Economic Development, the Institute for Social and Economic Research, Alaska Seafood Marketing Institute, the Alaska Center for International Business, the Alaska Office of International Trade, as well as seafood marketing newsletters and trade journals, a brief overview of current conditions is described here. While not all sources of information are consistent, they are close enough to indicate a clear trend.*

**Chilean farmed salmon** production was almost 60,000 metric tons last year including pen-raised trout and coho and Atlantic salmon. The Association of Chilean Salmon Farmers estimate production will reach 70,000 metric tons this year. Exports to Japan have gone from near zero in 1988 to 24,000 metric tons last year. Chilean salmon farmers hope export 44,000 metric tons to Japan this year, or almost 40% the volume of Alaska salmon exports to Japan in 1992. Most of the farmed Chilean product to Japan is frozen coho and trout that competes directly with Alaskan sockeye. Japanese companies like Nichiro and Nippon Suisan have invested heavily in fish farming operations in Chile. Most of Chile's Atlantic salmon is bound for the U.S. where it is marketed fresh. Chile harvested nearly 20,000 metric tons of Atlantic salmon last year and projections for next year range as high as metric 27,500 tons.

To increase their competitive edge, Chilean producers are focusing on research and development projects they hope will one day reproduce the efficiencies gained in the poultry industry. Their efforts to produce larger fish in less time have already contributed to reduced production costs.

**Russian salmon** production is expected to exceed 300,000 metric tons in 1993. Salmon exported to Japan or guaranteed in quota arrangements have also increased substantially. Since 1988 quotas issued for Japanese harvest of salmon in the Russian EEZ has increased from 2,000 metric tons to 17,300 metric tons in 1992. Quotas granted to the Japanese in 1993 are projected to reach 21,000 metric tons. Since 1988, Russian export of salmon to Japan has increased from 1,200 metric tons to 16,400 metric tons (including 6,000 metric tons of sockeyes) in 1992. In the first six months of this year, that figure has already been topped.

In return for guaranteed salmon quotas, the Japanese agreed to invest in Russian salmon hatcheries and processing equipment. There are now 24 hatcheries in the Russian Far East that contribute a significant share of annual salmon production there. Like Alaska, pink runs make up most of the return, about half the value and fluctuate on the same odd and even year cycle. Russia became the world's largest pink producer in 1991 when 476 million pounds of pinks were landed; 123 million more pounds than Alaska.

Joint venture activities have increased product quality and value-added production. Last year the average export price of headed and gutted (H&G) frozen pink salmon was \$.33/lb., or about one-half the cost of the same product in Alaska despite extremely low ex-vessel prices. Continued low prices and high production of Russian salmon loom as a considerable threat to Alaskan salmon should the Russian economy stabilize and quality and processing equipment continue to improve.

**Norway's salmon** industry has recovered from the salmon farm bankruptcies of 1991. Despite reduced production expectations, better mortality rates pegs this year's Norwegian production at 170,000 metric tons with projections climbing to 200,000 metric tons next year. Norway is working for a reversal or reduction of U.S. anti-dumping duties and has been developing value-added salmon products which are not subject to anti-dumping duties. While its primary market is in Europe, Norway is increasing market activities in Eastern Europe and Japan.

But Alaska's biggest competitor in Japan is **Japanese produced salmon**. After passage of the Magnuson Act, the Japanese government encouraged

development of Japanese coastal hatchery programs. Today, the coastal fisheries are entirely dependent on returning hatchery salmon. Chum salmon catches, the predominate hatchery-reared species in Japan, increased from 20,000 metric tons in the 1970's to approximately 120,000 metric tons in recent years. However, Japanese fall chum hatchery returns have been declining in the past two years and are projected to be closer to 65,000 metric tons this year. Annual Japanese farmed salmon production has increased from 70 metric tons in 1978 to approximately 20,000 metric tons.

All of these changes are among the many market forces which have caused U.S. salmon to drop from 85% of the salmon imported into Japan to just 60% in 1992. The big winners in the Japanese import market last year were Chile with a 13% share and Russia with almost 10% share of the market. Projections indicate their continued penetration into the Japanese market place. Still, the Japanese market place remains the most important market for Alaskan salmon. Forty-five percent of all Alaskan fresh and frozen salmon, including 81% of sockeye salmon, were exported to Japan last year.

### THE SCENARIO WORKSHOP

Before scenarios could be developed, workshop participants had to agree which forces including market share, quality, price, demand, supply, fishing lifestyle, over-capitalization and cost of production influence the Alaska salmon industry.

There was one important constraint to this discussion. While prices were clearly on everyone's mind, a group of this sort could not discuss them. As a briefing by the state Attorney General's office made clear during the meeting, state and federal anti-trust laws prohibit discussions of price by processors even in a public forum. The group agreed appropriate action should be sought to remedy this constraint so that the industry could move forward in cooperative solutions to price issues.

The most important influences on the Alaskan salmon industry identified by the group included; increased wild and farmed salmon production especially in Russia and Chile, increased cost of wild salmon production in relation to farmed production, competition from other protein sources, the inconsistent supply, quality and shelf-life of wild salmon, the lack of pin bone removal

technology, a shift in consumer preference to convenience-style foods, insufficient market knowledge, and an increasing inability to sustain traditional fishing employment lifestyles.

It is interesting to note that of all the forces identified by the group, *industry infighting* was determined the most potent factor in deterring the industry's ability to meet these challenges.

Some of these forces are beyond the ability of the state or the Alaska salmon industry to influence but the group agreed there were appropriate actions that could be taken to influence market conditions. These actions included; increased domestic marketing efforts, improved handling of fish, incentives for investment in value-added production, efforts to reduce the cost of production, and increased cooperation between the state and industry.

The group developed descriptions of what would happen if things continued to carry on as they are, without any unexpected positive developments or action being taken by industry participants or the state. Despite the differences in background, the group agreed the future does not look bright if nothing is done.

*It was anticipated that if no action is taken prices and profit margins will continue downward or remain at their current low level.*

Fishermen most burdened with permit, vessel and gear debt will probably not survive as participants in the industry. Survival will also be a looming issue for processors and hatcheries. If failure is widespread, the state will be in jeopardy of losing up to \$130 million in loans currently extended to fishermen, hatcheries and processors. Commercial banks also have at stake significant investment in the Alaska seafood industry.

*Either the Alaska salmon industry will have to suffer the consequences of a reduced global marketshare or something has to be done to increase the value of the fish.*

The group also tried to imagine an ideal future for the Alaska salmon industry. It would not be a return to cycles of boom and bust when prices were almost exclusively determined by run strength. In an ideal future prices and profits increase, salmon consumption goes up, wild and frozen salmon are perceived as superior, and farmed production drops. However, to accomplish those goals the group agreed the Alaskan salmon industry must take steps to improve quality, stabilize prices, develop new product forms and increase marketing efforts.

## THE SCENARIOS

Having identified current conditions and trends for the future, workshop participants focused on the development of specific scenarios. The group came up with "catchy" names that attempted to capture the essence of each scenario so that people could best remember the message.

The scenarios range from an optimistic future where salmon farming "fizzles," to a gloomy future where the wild salmon fail to return. These two scenarios, *Farming Fizzles* and *Lost at Sea* are wild cards. The remaining four scenarios represent more probable futures. These are *Pinbone Wizard*, *Red Hot Chile*, *Russian Roulette* and *Sayonara Baby*.

The group also developed *indicators* that would serve as early warning "road signs" to the industry that this particular future was unfolding. And finally the group listed actions the industry or state might take to affect more positive change as we travel down that road.

## Scenario 1: Farming Fizzles (Wild Card)

In this wild card scenario, the pen-reared salmon industry collapses. This would probably occur as the result of an epidemic disease or consumer health concerns causing market preference to dramatically shift back to wild salmon. This unexpected shift allows a rapid recovery of the Alaskan salmon industry as the market returns to wild caught salmon as its primary source of supply.

### **What happens if nothing is done:**

- \* Price of wild salmon goes up.
- \* Return to boom and bust cycles based on run strength.

### **Indicators:**

- \* Stories about the health consequences of pen raised salmon begin to appear in the media.
- \* Reports of pen-reared fish kills or disease.
- \* Reports of consumer illness traced to farmed salmon.
- \* Increased regulation of fish farms.
- \* Sales of farmed salmon flatten.
- \* Farmed production costs increase.
- \* Farmed production decreases.
- \* Wild salmon prices increase.

## Scenario 2: Pin Bone Wizard

Should this future unfold, advances in technology make possible accurate and cost-effective pin bone removal. This new technology permits the production of value-added salmon products that effectively compete with whitefish, poultry and other protein sources. Consistent quality and price are necessary at all stages of the value-added chain of production, forcing fishermen and processors to improve handling and refrigeration. Processors must invest in these new technologies in order to remain competitive.

### **What happens in this future if nothing is done:**

- \* Smaller fishermen and processors unable to make necessary refrigeration and processing investments are unable to survive.
- \* Consolidation of processors.
- \* Market dominance by a few players.

### **Indicators**

- \* Breakthroughs in machine vision or other new robotic technologies.
- \* Prototypes seen at trade shows.
- \* Testing of new equipment at processing plants.
- \* Trade journals review new equipment enthusiastically.
- \* Development of new product forms.
  
- \* Investment trend in processing equipment increases.

### **Possible Response Actions:**

- \* Establish tax credit and low interest loan incentives so that all participants can purchase value-added processing equipment, cold storage facilities and vessel refrigeration.
- \* Promote and support coordinated industry and local efforts such as cooperative or publicly owned and leased cold storage and secondary processing facilities that will reduce the cost of producing value-added salmon products.

## Scenario 3: Red Hot Chile

Should this future unfold, advances in pen-reared production of salmon are able to reproduce advances made in the poultry industry. Chilean salmon farmers already committed to development of these processes will be able to produce larger fish in less time and for less money. Wild salmon cannot compete effectively with the reduced cost of farmed production. Chile significantly increases its market share at the expense of Alaskan wild salmon. This prompts other nations to step-up farmed production which hastens the further demise of Alaskan market share.

### **What happens in this future:**

- \* Alaska salmon prices fall further.
- \* Requirement for quality increases.
- \* Requirement for price stability increases.
- \* Under-utilization of all wild salmon species increases.
- \* Continued loss of sockeye markets at all levels.

### **Indicators:**

- \* Increased inventories of wild salmon.
- \* Change in composition of Japanese and other markets.
- \* Increased investment in farming industry.
- \* Development of new product forms using farmed salmon.

### **Possible Response Actions:**

- \* Increased promotion of wild and frozen salmon as superior to farmed.
- \* Reduce the cost of production of Alaskan salmon by less reliance on tendering, reduction of harvesting fleet, and or more cost-effective processing technologies.
- \* Improve product handling at every stage of production.
- \* Develop value-added salmon technology and products.
- \* Implement tax credit and low interest loans for investment in refrigeration, value-added production and marketing.
- \* Legalize fish farming in Alaska.

## Scenario 4: Russian Roulette

Should this future unfold, Russia floods the market with cheap wild salmon. Low wages and the need for hard currency allow Russia to offer salmon at prices that damage the ability of Alaskan producers to compete. As Russia gains political and economic stability Asian, European and U.S. seafood companies increasingly participate in joint ventures or purchase of cheap Russian product.

### **What happens in this future:**

- \* Pink and chum salmon prices drop dramatically.
- \* Russians target low and or old technology products like canned and H&G products.
- \* Alaskan processors send floaters to Russian waters and or purchase Russian product on open market.
- \* Cheap Russian product is reprocessed in Asia into value-added products for resale into U.S. and European markets.

### **Indicators:**

- \* Increased political and economic stability in Russia.
- \* Increased joint-venture and hatchery activity.
- \* Increased Russian exports of salmon.
- \* Improved quality of Russian product.
- \* Increased foreign investments in Russian hatchery, harvesting and processing industry.
- \* Reduced investments in Alaskan salmon industry.

### **Possible Response Actions:**

- \* Encourage Russians to consume rather than export their salmon.
- \* Set higher standards for Alaskan salmon.
- \* Lobby for tariff barriers on Russian seafood products.
- \* Lobby for North American Fair Trade Agreement (NAFTA)-type conditions on U.S. aid to Russia which might include environmental, wage, health and safety and other standards.

- \* Increase demand and market share of Alaskan value-added salmon products.
- \* Increase value-added production in Alaska so that Russian raw product can be utilized in Alaskan plants to supplement product when Alaskan supply falls short of demand.
- \* Lobby for state and federal incentives to reduce the risk of transition to value-added salmon production.

## Scenario 5: Sayonara Baby

Should this future unfold, Japan increasingly expands its relationship with Russia and Chile. A political thaw between Russia and Japan continues to trigger extensive Japanese investment in Russian hatcheries and processing technology. This substantially increases the quality and quantity of Russian salmon production. In return, Russian harvesting allocations to Japan continue to increase. This, coupled with the bolstered output of high quality fish from Chile, allows the Japanese to express their dissatisfaction with the quality and cost of Alaskan salmon by shifting procurement elsewhere and divesting in Alaskan processing plants. Played out to its extreme, Alaska's market share in Japan evaporates precipitating a market collapse for Alaskan salmon.

### **What Happens in this future:**

- \* Sockeye prices collapse.
- \* Sockeye fishermen and processors go bankrupt or suffer huge losses.
- \* Deterioration of relationship between U.S. and Japan.

### **Indicators:**

- \* Chile and Russia continue to increase their market share in Japan at the expense of U.S. market share.
- \* Hard line market stance by Japanese buyers when negotiating purchases from Alaskan processors.
- \* Reduction of Japanese investment in Alaskan and Seattle processing industry.

### **Response Actions:**

- \* Stimulate expansion of Alaska salmon into U.S. market.
- \* Develop better understanding of Japanese market.
- \* Increase the quality and product forms of Alaska salmon available to Japanese, U.S. and other customers.
- \* Develop better market intelligence.

## Scenario 6: Lost at Sea (Wild Card)

In this future, Alaskan salmon stocks suffer serious decline or harvesting becomes severely restricted because of interception of endangered species of salmon, sea birds or sea mammals. Causes for population decline might include water temperature changes or ocean carrying capacity stress. Toxic contamination might also cause severe reductions in production or constrain harvesting efforts. This decline could occur suddenly or over several years. For whatever reason, Alaskan salmon becomes increasingly unavailable.

### **What happens in this future:**

- \* The shortfall in production of Alaskan salmon would be filled by competitors.
- \* Increased investment in competition would make recovery of Alaska's market share very difficult.
- \* Alaskan processors purchase fish from alternative sources, especially Russia.
- \* Pressure to permit salmon farming in Alaska increases.

### **Indicators:**

- \* Reduced numbers of returning Alaska salmon.
- \* Reduced weight of returning salmon.
- \* Increased time to maturity.
- \* Anomalies in fish characteristics.
- \* Reduced survival of eggs and fry.
- \* Environmental changes in water temperature and plankton production.
- \* Toxic spills or other contaminants reported in waters where salmon spawn or migrate.
- \* Increased endangered species or marine mammal protection regulations.
- \* Increased activity by environmental groups.

## Strategic Planning

Once scenarios have been built, they can be put to more uses than as a wind tunnel for testing new strategies. When scenarios highlight the likelihood of problems or events that might have a negative effect on the industry, communicating those scenarios to industry participants, politicians and the media can help move all players toward concerted and appropriate action. And as stated at the outset of this report, concerted action is urgently needed for the Alaska salmon industry to regain its leadership position in the global market place. Without the economic stability and health of the Alaskan salmon industry, the state and coastal economies are threatened.

While strategic responses have been recommended for most scenarios, there are some strategies that are appropriate under all scenarios. The group created a list of such options and identified in *italics* which participants could best implement those strategies.

**\* Improve market intelligence.** A radical improvement in overall gathering and dissemination of market conditions including detailed knowledge of customer needs, competitor's products and cost of production is necessary. The marketing assessment paid by fishermen to help fund the Alaska Seafood Marketing Institute is an excellent example of how to begin implementation of this strategy. However, both generic and branded marketing and promotional efforts are still seriously under-funded.

*( state and industry )*

**\* Improve marketing efforts.** Not only should generic marketing efforts be expanded through cooperative efforts with all salmon producers, but increased branded marketing is required if new products are to be accepted by the consumer. Low-interest matching loan programs that enable processors to more effectively market products would increase customer acceptance.

*( state and industry )*

**\* Respond to customer needs.** All industry participants should make increased efforts to learn what buyers in Japan, the U.S. and elsewhere want and how they can improve their product to meet those needs.

*( processors and fishermen )*

\* **Accelerate the development of value-added technology.** The Alaska Science and Technology Foundation should support promising research and development efforts for the manufacture of cost-effective mechanical pin bone removal technology.

*( state and industry )*

\* **Stimulate the development of value-added salmon production in Alaska.** Tax credit and other programs that would promote the purchase of secondary processing equipment, increased icing capacity and cold storage capacity should be supported. Proposed legislation that would fund a Seafood Product Development Endowment should also be lobbied for by industry.

*( state )*

\* **Improve quality.** Industry and the state should explore legislation or other methods that would insure the production of consistently high quality Alaskan salmon.

*( industry and state )*

\* **Review and change regulations where they impede product quality.** The Alaska Department of Fish and Game and the Board of Fish should be permitted to manage the fisheries for quality and market conditions when they do not negatively impact the health of the stocks. The timing of openings often determine whether brite or water-marked fish are delivered. Shorter but more frequent openings could increase quality significantly. Vessel length and gear restrictions sometimes have detrimental effects on the quality of fish delivered.

*( state )*

\* **Review and change regulations when they do *not* impede product quality or public safety.** Regulations by state and federal agencies that increase the cost of production without offering increased protection to the public should be reviewed and changed where appropriate.

*( state and federal )*

\* **Reduce the cost of production.** An overcapitalized harvesting fleet, high tendering costs, inefficient use of processing equipment and the lack of cold storage facilities all contribute to increased production costs. Permit buy back

programs financed by the state or by fishermen should be investigated. Cooperative or joint venture processing and cold storage facilities should be encouraged as well as increased mobile processing capacity.

*( industry and state )*

\* **Industry coordination.** Stabilizing fish prices is a key component in attracting investment in the production of new salmon products. Industry should seek anti-trust exemptions so that processors, aquaculture associations and fishermen can discuss in public forums issues including price without fear of court action. Similar exemptions are permitted in the public utility industry.

*( state and federal government )*

\* **Increase research and monitoring of resource .** More study is needed of near and distant water migration including the impact of increased international salmon production on food availability. Research should also focus on the relationship between ocean and estuary conditions including predator/prey relationships, changes in water temperature, salinity and other oceanographic factors that influence survival of salmon. This will improve run predictions as well as insure the future health of the resource. The state needs to centralize the collection of fisheries oceanographic data, production statistics and market information. This information needs to be analyzed and published annually so that it is available to industry participants and policy makers.

*( state and federal government )*

\* **Maintain state management of resource.** The federal government is increasing efforts to manage salmon through federal regulation and treaty. Further encroachment should be discouraged.

*( state and industry )*

\* **Impose NAFTA - like restrictions on competitors when unfair pricing advantage occurs.**

*( state and industry lobbying federal government )*

## Appendix

### Participants

Alaska Salmon Scenario Planning Strategy Session  
April 1 & 16, 1993

Paul Fuhs, Commissioner, Alaska Dept. of Commerce and Econ. Dev.  
Jeff Koenings, Director, ADF&G, Div. of Commercial Fishing  
Chuck Bundrant, President, Trident Seafoods  
Cheryl Sutton, Cook Inlet fisherman, ASMI Board of Directors  
Ken Roemhildt, Cordova plant manager, North Pacific Processors  
Floyd Hutchens, PWS fisherman  
Tim Blott, Kodiak plant manager, Cook Inlet Processing  
Chip Treinen, Kodiak fisherman, ASMI Board of Directors  
Stan Simonson, President, Golden Age Seafoods, Coastal Village Fisheries  
Bob Van Brocklin, PWS Aquaculture Corp. Board of Directors  
Woodman Harris, Seafood Management Corp.  
Darrell Bartholomew, R&D Director, Jerome Foods (poultry)  
Gunnar Knapp, economist, Inst. of Soc. and Econ. Research, UAA  
Chris Mitchell, Director, Ak. Fisheries Development Foundation  
Chuck Crapo, food scientist, Fisheries Industrial Tech. Center, UAF  
Craig Wiese, business specialist, Marine Advisory Program, UAF  
Donna Parker, fisheries specialist, Ak. Dept. of Commerce and Econ Dev.

### Participants

Alaska Value-Added Salmon Production Strategy Session  
January 20, 1993

Attendance at this meeting included 39 representatives from the following organizations, companies or state agencies:

North Pacific Processors, Kuskokwim Fishermen's Cooperative, Norquest Seafoods, Sitka Sound Seafoods, Health Sea Inc., Signature Seafoods Nautilus Marine Seafoods, Golden Age Seafoods, International Seafoods of Alaska, Alaska

Fisheries Development Foundation, Alaska Seafood Marketing Institute, Fisheries Industrial Technical Center, Alaska Science and Technology Foundation, Commercial Fishing and Agriculture Bank, PWS Aquaculture Association, Kodiak Regional Aquaculture Association, Northern Southeast Regional Aquaculture Association, Valdez Fisheries Development Association, Armstrong Keta Inc., Alaska Aquaculture Inc., Alaska Department of Fish and Game, and the Alaska Department of Commerce and Economic Development.