# INSTITUTE OF CURRENT WORLD AFFAIRS

February 25, 1992 Dear Peter,

The North Pacific ocean is the most productive fishery in the world. The North Pacific is usually defined as the the ocean region north of 40 degrees latitude, and includes the Bering Sea, the Sea of Okhotsk, the Japan Sea, the Gulf of Alaska, and the Alaska Archipelago. The shelf seas of this region 1 are subject to fishing by the nations that border it--The United States, Canada, The Russian Federation, and Japan--and by other nations with deep-water The fate of the North Pacific oceans is a fishing fleets. function of the complex interplay and balance of international, national, and private interests, played out in a desolate, windswept arena. In its distant seas the politics, laws, culture, and economics of mankind come together as on no other place on the planet. In the North Pacific, the interests of many nations and peoples are in a fragile, threatened equilibruim with the ecosystem of the sea. The fate of this region is daily determined in ports

<sup>1.</sup> The shelf sea areas are mainly shallow water regions located along the edges of the Asian and North American continental land masses. The deep-water regions of the North Pacific are located within a gyre of low biological productivity. The deep water areas located near the Aleutian Trench and Northern Japan have very productive fisheries due to the upwelling of nutrient-rich cold ocean water from the sea floor.

Since 1925 the Institute of Current World Affairs (the Crane-Rogers Foundation) has provided long-term fellowships to enable outstanding young adults to live outside the United States and write about international areas and issues. Endowed by the late Charles R. Crane, the Institute is also supported by contributions from like-minded individuals and foundations.

and on fishing vessels, in corporate boardrooms, courts of law, and the halls of government; but whether the problems that confront the North Pacific will be will be solved in a way that can maintain the vitality and viability of the region before it collapses under intense fishing pressure is as yet an open question.

The modern world is organized into many layers of organizational regimes effecting all levels of human society, on both a local and global scale. So it is in the North Pacific. The organizational regimes that have developed around the fisheries of the North Pacific are exceedingly complex, and have come into being from the interplay of historical, cultural, social, economic, and political factors, as well as by accident or circumstance. Entire volumes have been written about the North Pacific, and to address all of these issues thoroughly is far beyond the scope of this essay. However, before an even modest overview of the North Pacific fisheries can begin some discussion of the general biology and oceanography of the region is necessary. The bio-oceanographic factors are complex, but the general dynamics involved with making the system work are well understood by fisheries biologists.

A glance at a map of the North Pacific region reveals a number of interesting and unique geophysical features. 1 The region is subdivided into a number of shallow water lobes by island chains, notably the Japanese and Aleutian Islands. These represent the extent of the Asian continental shelf

<sup>1.</sup> All references to the fishing regimes and boundaries for the North Pacific are based on the seminal cartographic work for this region, "Atlas of Marine Use in the North Pacific Region", Miles, Sherman, Fluharty, Gibbs, Tanaka, and Oda. University of California Press, Berkeley and Los Angeles, California, 1982. I am grateful to the Director of the University of Washington School of Fisheries, Professor Edward L. Miles, for his generous gift of this atlas.

into the deeper waters of the North Pacific, and are located on the subducting edge of Pacific plate. 2 These shallow water lobes are, from East to West, the Sea of Japan, the Sea of Okhotsk, and the Bering Sea. The shallow-water seas have an average depth of between three and six hundred meters. In the Northeast sector, the North American continental shelf waters of the Gulf of Alaska and the Alaska Archipelago have very productive fisheries, but drop off steeply into the abyssal waters of the Pacific Ocean.

The lobe-sea regions and continental shelf waters are subject to large, regular inflows of nutrients from rivers and streams during the temperate zone and Arctic spring melting period. They receive nutrients stored in sea ice during the spring ice-out as well. Cold water is physically able to hold more oxygen than warmer water, and the temperature of these lobe-seas is maintained year round between +1 and +3 degrees Celsuis. The result is heavily oxygenated seawater with a temperature constant favorable for life. 3 In the spring, sunlight adds large amounts of energy to the cold, nutrient rich, oxygenated water, creating ideal conditions for vast blooms of phyto- and zooplankton. These microorganisms in turn support a complex food chain of suspension feeders, which consume these organisms by filtering water through gills, nets, or baleen, and predators. The planktonic blooms are rich enough to

3. The freezing point of seawater is approximately -2.5 degrees Celsius, and that although there is winter icing of these seas, only the top water is frozen. This insulates the water below, allowing it to maintain a constant temperature.

<sup>2.</sup> There is an excellent map of the "Earth's Rifts, Ridges, and Rises" in the Winter, 1991/1992, issue of Oceanus (V. 34, No. 4 pp 24-25). See also in this issue the article "Ridges and Rises: A Global View" (pp 26-35) by Peter Lonsdale and Chris Small for an explaination of the plate tectonics underlying the geography of this and other ocean regions.

support a food chain extending from the lowly shrimp to the largest living organisms on earth, the various species of whales, which migrate great distances to the waters of the North Pacific for the spring and summer to feast on the plankton.

Climate contributes its share to the productive capabilities of the lobe-seas of the North Pacific region. The North Pacific region is infamous among mariners for ferocious storms and high winds. These storms, however terrible for navigation, make conditions excellent better for supporting marine life. Since all of these seas are relatively shallow, the nutrients and oxygen in them are evenly mixed throughout the water column by the constant action of wind and wave. The waters of these lobe seas receive additional warmer waters from the South Pacific via the Japan Current, which intermingle with the colder local water to create favorable mixing zones for enhanced planktonic production. Warm water and minerals jet into the deep sea from vents located in the back arcs of subduction trenches at the junctions of continental plates, although marine researchers are not certain how great a role these vents play in the marine biology of the region.

The result of these favorable geographical, physical, and biological factors is a fisheries region of unparalled diversity, productivity, and commercial value. The fisheries of the North Pacific are commonly divided for simplicity's sake into salmon, groundfish, halibut, and crab.

By far the best known eating and sport fish of the North Pacific is the salmon. Salmon are esteemed by gourmets throughout the world for their firm, red, delicious flesh and delicate, distinct flavor. Salmon is baked, broiled, poached, smoked, dried, fried, salted, and sauteed; it is eaten in fast-food establishments, flown overnight on ice

fresh from Alaska to five-star restaurants in New York, Paris, and Hong Kong. While some salmon is farmed in Chile, Canada, and Norway in significant quantities, Alaskan salmon is generally raised in hatcheries. The hatchlings are released into streams and find their way  $top_{\Lambda}^{\varphi}$  the Bering Sea and the Gulf of Alaska, and on into the deep waters of the Pacific. These hatchlings return after two years in the open ocean to the streams where they were released and create spectacular runs of millions of fish. The North Pacific supports vast populations of salmonids, including the king salmon (Oncorhyncus tsawytscha), the sockeye or red salmon (O. nerka), the silver or coho salmon (O. kisutch), the pink or humpback salmon (0. gorbusha), and the chum or silverbrite salmon (O. keta). 4 Of these, the king is considered the best eating, due to its bright red flesh and distinctive flavor. Sockeye and coho slightly less colorful and flavorful, while pink and chum are considered the lowest grade. All five species find their way to the market as either fresh, frozen, smoked, or canned product.

Besides the valuable salmonids, the North Pacific has many different species of groundfish, so called because they are pelagic feeders, spending most of their adult lives on the ocean floor. Many groundfish are commercially important. There are five or six different kinds of sole (Pleuronictidea), notably the yellowfin and rock sole, mainstays in the Soviet-American joint fishing ventures of the 1970s and 1980s. The Pacific cod (Gadus macrocephalus),

<sup>4.</sup> The genus name for the salmon "Oncorhyncus", is derived from the greek words "onco" (hook) and "rhyno" (nose). The species names are a legacy of the Russian Imperial explorations of Siberia and Alaska. For example, the species name for the pink or humpback salmon, "gorbsha", translates from Russian to English as "humped". It is the same root word for the family name of the former and final General Secretary of the Communist Party of the Soviet Union, Mikhail Gorbachev. Source: Alaska Seafood Marketing Institute.

a ravenous piscivore that can grow from less than one gram to over thirty pounds in a little more than two years, is eaten worldwide, baked or broiled in Europe, or simmered in a hearty winter stew in Japan. The shallow waters of the Bering Sea and the Sea of Okhotsk hold enormous stocks of what is now the most commercially valuable fish in the world, the Alaska pollock (Theragra chalcogramma). Once disdained by fishermen as a trash fish, the soft-fleshed, silvery pollock is now the glory of the multimillion dollar surimi industry. The largest of the groundfish is the halibut (Hippoglossus stenolepis), a monster fish that can grow to over three hundred pounds. The halibut is so valuable that it has an entire international management council to maintain its stocks in North American waters, and is worshipped as a god by the Tlingit, Tsimshian, and Haida Indians. Besides these, the North Pacific has highly productive fisheries for Atka mackerel (Pleurogrammus azonus and monopterigius), anchovy (Engrualis japonica), rockfish (Scorpaenidae), sablefish (Anaplopoma fimbria), sardines (Sardinops melanostica), and ocean perch (Sebastes alutus). Of special note are the tiny but abundant herring (Clupae harengus pallasi) in the channels and fjiords of the Alaska Archipelago, with a delicately flavored roe cherished by the Japanese.

The coastal waters of the North Pacific are inhabited by three species of commercially valuable crustacea, which are the target of fishing operations vital to the Alaskan economy. The shallower waters sustain large populations of Tanner crabs (Chionoecetes bairdi and opilio), commonly known as snow crab. These crabs, once considered "trash" by crabbers in the Bering Sea, moved to the forefront after the collapse of the King crab fishery in the late 1960s and early 1970s. Snow crab is a staple in the fast-food and family restaurant industry. The enormous King crab (Paralithodes camtshatica) is considered the best eating crab in the world. Although it can be as expensive as \$15 per pound, there is still a market in fine restaurants for this spiny behemouth, and the price may soon drop because of an influx of Kings from the Russian Federation. 5

In addition to these better-known creatures, the North Pacific supports active fisheries for shrimp, sea urchins, octopus, sea cucumbers, and commercially harvested shellfish. The North Pacific is home for many rare kinds of mammals, many of which were hunted to near extinction before international conservation efforts combined to protect them. Important species include the sei, bow, sperm, and killer whales, walrus, fur seals, sea lions, sea otter, and polar bear. Although these marine mammals are protected in the United States under the Marine Mammal Protection Act (1972) they are still subject to serious pressures from man, as a result of both local fishing efforts and distant economic demands. For example, United States law enforcement agencies recently broke up a walrus poaching ring of over fifty people in the Bering Sea. Their motivation was the high price of ivory, which has gone into short supply on the world market because of strong international efforts to close down the African ivory trade. 6 Stocks of Stellar sea lions are currently threatened by depletion of pollock stocks by increased factory trawler activity in the Bering Sea, which has led to the establishment of protected zones around rookeries. The National Marine Fisheries Service is considering drastic cuts for the pollock quota if the Stellar sea lion is found to be endangered by pollock fishing.7

<sup>5.</sup> As the name species suggests, the King crab was first discovered near the Kamchatka Peninsula by Russian explorers in the Far East and Bering Sea.

<sup>6.</sup> The Seattle Times, February 19, 1992.

An exceedingly complex regime of economic zones and international management organizations has developed to regulate the fisheries and protect the environmental integrity of this region. To best understand the international management regime governing mankind's activities in the North Pacific, it is necessary to first review the boundaries of the Exclusive Economic Zones that define it. Under the terms of the Third United Nations Conference on the Law of the Sea (UNCLOS-III, adopted in Caracas, Venezuala, 1982), all coastal nations were conferred by international agreement the right to exclusive management of natural resources extending two hundred miles from their coastal boundaries. The agreement explicitely includes fisheries resources. The Exclusive Economic Zone (EEZ) may extend as far as the continental shelf to allow nations to control mineral resources. Under UNCLOS-III, nations are called on to jointly manage fishing stocks migrating from the coastal zone into open ocean, called straddling stocks, or stocks of highly migratory fish, like salmon, which spend a good portion of their life in open ocean. In theory, nations will cooperate to ensure the longterm viability of these stocks; but in practice, this is a source of dispute, since there is often insufficient or incomplete information about fish migrations. 8 It is

7. "Sea Lions Endangered in '92?" by Donna Parker. Alaska Fisherman's Journal Yearbook, 1991. The current NMFS recommended pollock quota for 1992 is 130,000 mt; the environmental group Greenpeace advocates a drop to 73,000 mt.

8. Recently, the use of this proviso has become an important lever for the Russian Federation and the United States in their efforts to close the Bering Sea "Donut Hole" to thirdcountry fishing fleets, since it has recently been proven that pollock stocks from both nations migrate through this zone. Marine biologists from Russia and the United States have long maintained that overfishing by third-country vessels in the "Donut Hole" is responsible for the decline of pollock stocks; new evidence now bears hypothesis this

important to note the United States is not a signatory on the Treaty on the Law of the Sea, while Japan, the Soviet Union (now the Russian Federation), the Republic of Korea, and Taiwan are. The United States tends to honor the provisions of the Treaty, but only selectively. For example, it wishes to convince other nations to regulate fishing in the Donut Hole to prevent the depletion of the Bering Sea pollock stocks, while refusing to aknowledge the contention that tuna, a highly migratory fish, is a resource subject to regulation by nations explaiding it.9 The United States enacted the Magnuson Act in 1976 to protect American fisheries, effectively closing its water, including the Bering Sea and the Gulf of Alaska, to foreign fishing efforts by extending American territorial waters from 12 miles to 200 miles. The major American federal regulatory agencies directly involved in managing the Alaska fisheries are the National Marine Fisheries Service, the North Pacific Fisheries Management Council, the Board of Fisheries, the Coast Guard, and the Congress of the United States. State regulatory bodies include the Alaska Department of Fish and Game, the Alaska State Legislature, and local governments. Beyond these there are dozens of fishermen's organizations and other regulatory bodies for virtually every known aspect of the fishing industry--The International Pacific Halibut Commission, the Alaska Draggers Association, the American Factory Trawler Association, the Bering Sea Fishermen's Association, and many, many more.

out. See "Donut Hole pollock are U.S. natives", National Fisherman, January 1992, West Coast Focus, p 2. The issues surrounding the "Donut Hole" are of global importance, and how they are decided will have long-term implications for policy concerning straddling stocks and open-ocean fishing.

9. Pollock stocks in the Donut Hole have been seriously depleted since the record harvest of 1.5 million mt in 1989; in 1991, the total pollock harvest for all nations is estimated to be only 400,000 mt.

Nations of the North Pacific region use their territorial waters within the EEZ as a source of employment and food, and as a way to generate needed revenues by selling the right to fish in its waters to other nations or companies. The patchwork of EEZs in the North Pacific confer exCLUSIVE fishing zones to the People's Republic of China, North and South Korea, Japan, the Russian Federation, the United States, and Canada. There are areas where the boundaries are disputed, especially around the Kurile Islands, which are still the subject of contention between the Russian Federation and Japan despite the change of government in the former. The Bering Sea border between the Russian EEZ and the United States EEZ redrawn in 1991, resulting in the United States gaining a few thousand extra square miles of ocean; but in general, there is little serious disagreement over borders in the North Pacific; the main issues center on the origins of fish stocks, since this determines who is entitled to harvest them. There are two open zones within these contigious EEZs, one in the Sea of Okhotsk, the Peanut Hole, with a size of about 16,000 square miles, and one in the Bering Sea, the infamous Donut Hole, which measures approximately 54,000 square miles. These open areas are subject to a great deal of fishing pressure not only by the nations whose EEZs surround them, the United States and the Russian Federation, but by nations whose deep water fleets venture into these zones to fish without restriction. These anomalous zones are the subject of much controversy, and highlight the problems that confront the North Pacific.

The fisheries of the North Pacific are utilized not only by the nations with Exclusive Economic Zones, but by other nations with an interest in exploiting the region's riches. As noted above, interested nations may negotiate or purchase the right to fish in a given EEZ, either in a joint fishing operation with the host nation, or by a directed fishery. In the past, this has meant the presence of Japanese, Polish,

Taiwanese, PRC, and Bulgarian vessels in American waters; at present, it accounts for the proliferation of joint and directed fisheries in the EEZ of the former Soviet Union. The financial rewards for successfully exploiting the fisheries resources in the North Pacific are counted in the billions of dollars, and have created an international industry noted for its vitality and competitiveness. There are three important bilateral relations in the North Pacific: the United States and the Russian Federation, Japan and the Russian Federation, and the United States and Japan 10. Each one of these bilateral relations is a unique problem, and each will be treated seperately in subsequent reports. The remainder of this newsletter will highlight some of the economic, social, and political aspects of the largest and most important fisheries relationship in the North Pacific region, between Japan and the United States.

The Japanese appetite for fresh fish and fish products is the driving force behind the multimillion dollar Alaska fishing industry. Fresh fish occupies the same revered position in Japanese cuisine as beef does in American cuisine, with the same connotations of romance for the people of an island nation as steak has in a cattle culture. Japan appears to many Americans to dominate US-Japanese trade relations, but the fact is that the Japanese import seventy to eighty percent of all the fish caught in the

<sup>10.</sup> These represent the most important actors in the North Pacific. Canada has not invested as heavily as the United States, Russia, or Japan in a deep-water fishing fleet, and cannot be considered as important a player in the distantwater fishing game of the North Pacific region. South Korea and Taiwan do have deep-water fishing capability, as does Poland, and they are interested in keeping the Peanut and Donut Holes open-access fishing areas; but none of these nations have the amount of capital investment in deep water fishing that the Big Three do. The People's Republic of China and North Korea at present do not have more than a token presence in the area.

state of Alaska. As one salmon fisherman aptly said, "Japan is a black hole for fish."

Virtually all of Alaska's fish are important on the Japanese market. Japanese demand for vast quantities of high-quality salmon fuels often frenzied fishing activity, and the yearly fishing seasons, or "openings", which can last as little as a week, seem ludicrously short to non-fishermen. 11 Despite the short periods of activity, however, profits are enough to provide thousands of American fishermen with an excellent livelihood. In 1991, for example, almost 26.2 million red salmon (worth \$108.7 million dollars) and 36,400 king salmon were harvested in Bristol Bay in less than two weeks during the eastern Bering Sea early summer salmon run. 12 Total landings for all salmon for Alaska were nearly 190 million fish, with a value of over \$305 million. Profit margins were better for some than for others, with king salmon fishermen the big winners: the value of a single king salmon was over \$4 per pound for a prime quality fish!

The Japanese taste for surimi, the highly processed fish product based on the traditional Japanese 'kumike', has created a billion dollar industry out of the lowest of the trash fish, the pollock. The pollock is not by itself a flavorful fish, but it is abundant, and with the proper 8technology, it becomes a highly-processed fish protein gel

<sup>11.</sup> Fishing windows are carefully timed by Alaska Fish and Game to coincide with the moment when the migrating salmon are at the mouths of their spawning streams. The beginning of the salmon run is spotted by small plane; the biological timing of the run is very consistent, with variations a few days from year to year. The trick is to intercept the salmon in the bays and inlets as they make their way to the spawning streams.

<sup>12.</sup> Alaska Fisherman's Journal Yearbook, 1991, "Statewide Glut Yields Low, Low Value" p 20. 8

that is the basis for dozens of analogue products, such as seafood salad or crab. (Recently, however, the price of real crab has fallen enough to make it an excellent substitute for surimi crab). Factory trawlers in the United States EEZ will harvest a whopping 1.3 million tons of this soft, silvery groundfish from the Bering Sea during two openings in 1992 (an "A" and a "B" season), with 80 to 90 percent of that destined for Asian markets. In Japan, per capita consumption is close 16 pounds per year. There are currently available over two thousand analogue products made from surimi available in Japan, including surimi potato chips and cakes, but the most valued is the opalescent fish loaf produced on the best surimi processors. High-gel strength surimi currently sells retail for \$2.85 a pound F.O.B. in Seattle, and world supplies are scarce, making it unlikely that demand or industry pressure for larger fishing quotas will decrease soon. 14

To celebrate the New Year, Japanese feast on highly prized Alaska herring roe. Herring roe is worth so much that one fisherman in Alaska made himself a legend by catching one million dollars worth of it in a single half-hour. This may be a tall tale; but the profits to be made during the single one-half hour long yearly opening are very real. The 1991 herring roe season resulted in landing of nearly 43,000 tons, with an ex-vessel worth of nearly \$22.5 million. Japanese demand for Alaska fish includes foods more familiar to American and European palates, such as Pacific cod, (167,380 mt landed in the Bering Sea ), and halibut, which had an astounding 43 million pound harvest in 48 total hours of fishing. King crab, meanwhile, yielded 17.2 million

<sup>14. &</sup>quot;The Surimi Squeeze", by Katherine Marris, Seafood Business, November/December 1991, Vol. 10 No. 7.

<sup>15. &</sup>quot;State Herring Harvest Tops 42,000 Tons", Alaska Fisherman's Journal Yearbook '91, p 30.

pounds worth \$51.6 million in seven days of effort by 301 boats. 16 Bairdi crab quotas for 1991 were set at just over 32 million pounds, with prices disputed between buyers and crabbers between \$1.25 and \$1.75 per pound. 17

To insure the consistent delivery of high quality fish to their demanding markets, Japanese businesses have invested heavily in Alaska's fisheries, and maintain a high profile in the industry, often occupying key positions in management and quality control. According to a report by the United States General Accounting Office (GAO), there are 117 Japanese majority fishing companies operating in Alaska, Washington State, and Oregon; however, due to reporting standards about ownership that vary from state to state, the exact scope of this investment is unclear. Many fishing companies predominantly owned by Americans are contracted to ship their entire production to Japan. 18 The Japanese own salmon processing plants in Bristol Bay, crab processing plants in Kodiak and Dutch Harbor, and shore-based surimi plants in Dutch Harbor and other locations. These operations provide year-round employment to locals in many towns that traditionally depended upon an influx of seasonal money.

17. Op cit, 12.

<sup>16. &</sup>quot;Crabbers Strike Over Bairdi Prices" by Bob King, Alaska Fisherman's Journal, January, 1992.

<sup>18. &</sup>quot;GAO reports on the scope of foreign investment in the North Pacific" by Todd Campbell, National Fisherman, January, 1992. This article highlights much of the acrimony against the Japanese for alleged market manipulation. One American businessman is quoted, "When the Japanese control the market and they control the supply, they are in a position to dictate price and call the shots in this industry. I know this allegation is tough to prove, but I believe in my heart that you are going to see them behin work to maintain market share by gradually eliminating U.S. operators."

Yet there is widespread dissatisfaction with the highprofile foreign presence. This contradiction often strains the powerful symbiosis of Alaskan marine resources and Japanese capital in unusual ways. For example, the Japanese company Nippon Suisan Kaisha Ltd., represented by its American subsidiary Unisea, opened a new, \$79.3 million "G-2" surimi shore-based plant in Dutch Harbor in 1991. Although Nippon Suisan was lauded by Alaska Governer Walter Hickel as "Offshore Trade Partner for the Year", construction of the plant exacerbated the problem of distributing Alaska's pollock resources between shore-based plants and the factory trawler fleet. This, fleet operates primarily out of Seattle, and is drastically overcapitalized, sending owners scrambling for any possible competitive edge in the tussle for resources. 19 Disputes between the shore-based and factory trawler surimi industries are further embittered by accusations by both sides of foreign-interest ( read: Japanese) domination. Yet, both sides of the industry are predominantly Japanese owned, and ship their product primarily to Japan. There have been many efforts to resolve the allocation issue, and while the trend was in favor of the shore-based plants, a recent scheme by the North Pacific Fishery Management Council to divide the pollock catch 45/55 percent between land based and oceangoing processors will likely be overturned by the United States Commerce Department. The shore-based plants will then continue to compete with factory processors in the "Olympic system", meaning that the pollock quota is caught by whoever can catch it fastest, with no allocation of fish in favor of any one boat or processing method. This will result in the factory trawler fleet again capturing the lion's share of the pollock quota. 20

<sup>19. &</sup>quot;Traditional sake ceremony opens Unisea's surimi plant" by Kris Freeman, Seafood Business, September/October, 1991.

Periodically, the Japanese will offer to pay a price for fish far below what was offered in the past. This happened in Bristol Bay during the summer of 1991, when Japanese buyers surprised salmon fishermen by offering \$.70 per pound for sockeye salmon, down from \$2.10 per pound in 1988. The result was a bitter strike during the height of the salmon run that was resolved only after tense and acrimonious negotiations. The resolution to this crisis was an unsatisfactory compromise which got the fishermen back on the grounds, but left the question of consistent prices for salmon open. One result may be negotiating a minimum price for salmon between the fishermen and the buyers prior to the start of the season; however, fishermen are notoriously independent, and working in a cooperative effort to set prices may be too difficult before the next season. According to a GAO report on the strike, the main causes for the low price of salmon on the market was the huge size of the catch (25 million fish), a 131,000 ton plus inventory of salmon in Japanese warehouses, and competitively priced high-quality salmon from Norway and Chile, which now accounts for thirty percent of the salmon market share in Apparently, the low Japanese price offer was based Japan. on an expected influx of high-quality Norwegian farmed salmon into the world, market. This salmon was allegedly going to be "dumped", prices far below those for Alaska salmon. Combined efforts by United States through its Trade Representative to GATT in Geneva has so far kept the 37,500 ton "bomb" of salmon from landing on Western markets,

20. "U.S. urged to reject proposal to split Alaska pollock catch", by David Schaefer, Seattle Times, February 22, 1992. The article notes that Washington State factory trawlers are 70 percent American owned, while four of the five shorebased surimi plants in Alaska are Japanese.

21. "Farmers Snatch Salmon Market", Fishing News International, November 1991, Vol. 30, No. 11. and the Norwegians allegedly have promised to sell this salmon in the newly-opened markets of Eastern Europe. 22

Despite the difficulties caused by a volatile international market and cultural differences, however, Japanese relations with their American counterparts are for the most part cooperative, as everyone involved has an interest in keeping the trade relationship working. 23 There have been some remarkable comprimises in the past year, which perhaps herald a new spirit of cooperation in the North Pacific. The Japanese have at last relented to international pressure to halt high-seas drift net fishing operations by December 31, 1992. Gaining Japanese agreement to stop this destructive practice, which not only targeted salmon illegally but killed countless thousands of marine mammals and birds, has been hailed as a major step forward in stabilizing fishing practices in the North Pacific. It is widely regarded, too, as a landmark decision in favor of more ecologically-sound fishing practices in the North Pacific in general.

While the Japanese and the Americans are bound into their bilateral fishing relations by market forces, the Russian Republic and the United States share an actual, physical boundary in the Bering Sea. This makes the Bering Sea, and

<sup>22.</sup> Alaska Fisherman's Journal Market Report, February, 1992, Vol. 15, No. 2.

<sup>23.</sup> A 1989 study by Edward L. Miles of the University of Washington School of Fisheries Research Institute, "The U.S./Japan Fisheries Relationship in the Northeast Pacific: From Conflict to Cooperation?" highlights what may be the major obstacle to smooth relations: "The Japanese fisheries industry is highly organized and, while it is not a single, unified entity, the different components of the industry possess the capability to think and plan strategically for the long term. The U.S. industry, on the other hand, is very fragmented and lacks the capability to think and plan strategically for the long term." Or, as one Alaskan salmon fisherman said, "The Japanese have long money."

the management of its indiginious fish stocks, the most important determinant of fisheries relations between them. The complex relations between the United States and the Russian Federation, and their efforts to jointly utilize common fishing stocks, will be the topic of the next newsletter.

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