

**Pacific Urchin Harvesters Association
and the
West Coast Green Urchin Association
Agriculture and Agri-Food Canada**

**2007 - 2008 Report of the
Sea Urchins From Canada
Marketing Initiative**

**Funded by the
Canadian Agriculture and Food International
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Final Report

Sea Urchins From Canada 2007/08

Executive Summary

Sales this year were disappointing for at least the third year in a row. Fishing did not get really started until late October and weak market conditions and poor weather limited volumes throughout the 2007/08 season. Canadian producers have not fundamentally changed their strategy, other than to limit production, over the past few years and most firms remain largely dependent on the Japanese market. Less than 50% of the Total Allowable Catch was actually harvested by each fishery but the financial condition of the industry associations improved marginally. In the Green Sea Urchin (GSU) fishery this was due to a slight improvement in the harvest numbers improved over the past two years while in the Red Sea Urchin (RSU) fishery the harvest declined and the financial improvement was largely due to concessions allowed by Fisheries and Oceans Canada on On-Grounds Monitoring (OGM), research and survey costs.

Still, the poor performance this past year has affected levels of cooperation in the industry as some companies were essentially forced to pursue pricing strategies which undercut the market and weakened the position of the industry as a whole. With reference directly to the CAFI program, interest in following through on the international travel components was subdued and trips to Brussels, Japan and China were cancelled for the second consecutive year.

According to Andrea Mandel-Campbell, a veteran journalist specializing in international business and global competitiveness, “These days everything is a commodity, so unless you add some intrinsic value in terms of a brand, and in terms of how you market that product, you will be competing on price regardless of your other intentions”. Having a strong identity is increasingly the difference between flourishing in a global economy and simply struggling to make ends meet. The effective degree to which BC operations are differentiated from other “commodity” suppliers to build preferential demand varies, but the impacts of influences remaining beyond the control of Canadian producers are pretty much beyond dispute.

There are three main factors beyond the control of Canadian producers for which effective response options are limited. These have not changed substantially from last year and are identified as the continuing:

- ✧ Illegal, Unregulated and Unreported (IUU) sea urchin fishing in Russia that is flooding sea urchin markets in Japan with low cost product.
- ✧ rise of the Canadian dollar which is propelling BC uni into a higher price bracket; and
- ✧ weakness in the Japanese economy that is constraining consumption of especially mid-range luxury goods;

Harvest limitations because of poor weather restricting access to exposed areas over the winter have again been significant this year. Access to stocks in many remote and/or exposed areas is a continuing problem and remains subject to the vagaries of weather and feasibility. The problems are exacerbated by shrinking fleet size as more time is then required to cover off the area,

increasing unit costs on an already often economically marginal operation. These areas are problematical but the industry should be able to eventually exploit them profitably given the right economic conditions although establishing a viable operation which can consistently access the resource is going to require considerable innovation. This may involve what would be currently out-of-season harvests, live inventory and holding systems and periodically ordered (as opposed to dedicated) packing runs, but progress on this depends in considerable measure on more favourable market conditions.

The developments witnessed this year have cast doubts on the effectiveness of the existing Long Term International Strategy (LTIS) pursued by the Sea Urchins from Canada group and the decision has been taken to step back to reassess the industry's strategic options, revise the agreement to better define the terms on which they can they can feasibly cooperate and, accordingly, to develop a new plan. This decision is supported by the probability that in the near term, at least the first two conditions are expected to continue and, while Russia is apparently moving to address the IUU urchin harvest, the resulting production decline may be insufficient to substantially relieve the price pressures. Continuing uncertainty in the market is pretty much assured which suggests that the most appropriate response is to improve the quality profile and differentiation of Canadian product going into Japan and to identify new market opportunities to reduce industry's absolute reliance on the Japanese winter market. The revised strategy may include extending the seasons as well moving into different countries, but in any case, innovation: developing and refining signature products and services offer a way to attract favourable attention in the market.

This report provides more details on developments, and hopefully some insights into the trends, affecting the market this past year. The pace of technological, socioeconomic and environmental change continues to accelerate in our globalizing world and the opportunities facing us are sometimes hard to pick out against a background where the risks are often more prominently played up for public consumption. Sustainability is not simply stability intended to last for only a few years, real sustainability must take a much longer view even as it is structured to respond flexibly to shorter term economic and environmental variability. There is no argument but that these are very trying times for the industry but realistic and practical survivors will emerge to be stronger, and more profitable, than before.

Continuing efforts to build sectoral and international coalitions and cooperation are recommended. On the sectoral level, too much internal competition which reduces the willingness of players to work together makes the whole industry weaker and opens it to unfavourable manipulation along the lines of the old dictum of "be divided and be conquered". On the international scale, building understanding and bridges between cultures is now too important to be left solely to governments and linkages between informed groups with common interests will strengthen incentives to further cooperation. Multicultural Canada has a unique, and perhaps privileged, reputation around the world as trustworthy, fair and tolerant. The commercial success of sustainable enterprises, such as BC's Sea Urchin fisheries, building from this reputation provides an affirmative way forward that is consistent with today's increasingly environmentally aware markets.

Final Report

Sea Urchins From Canada 2007/08

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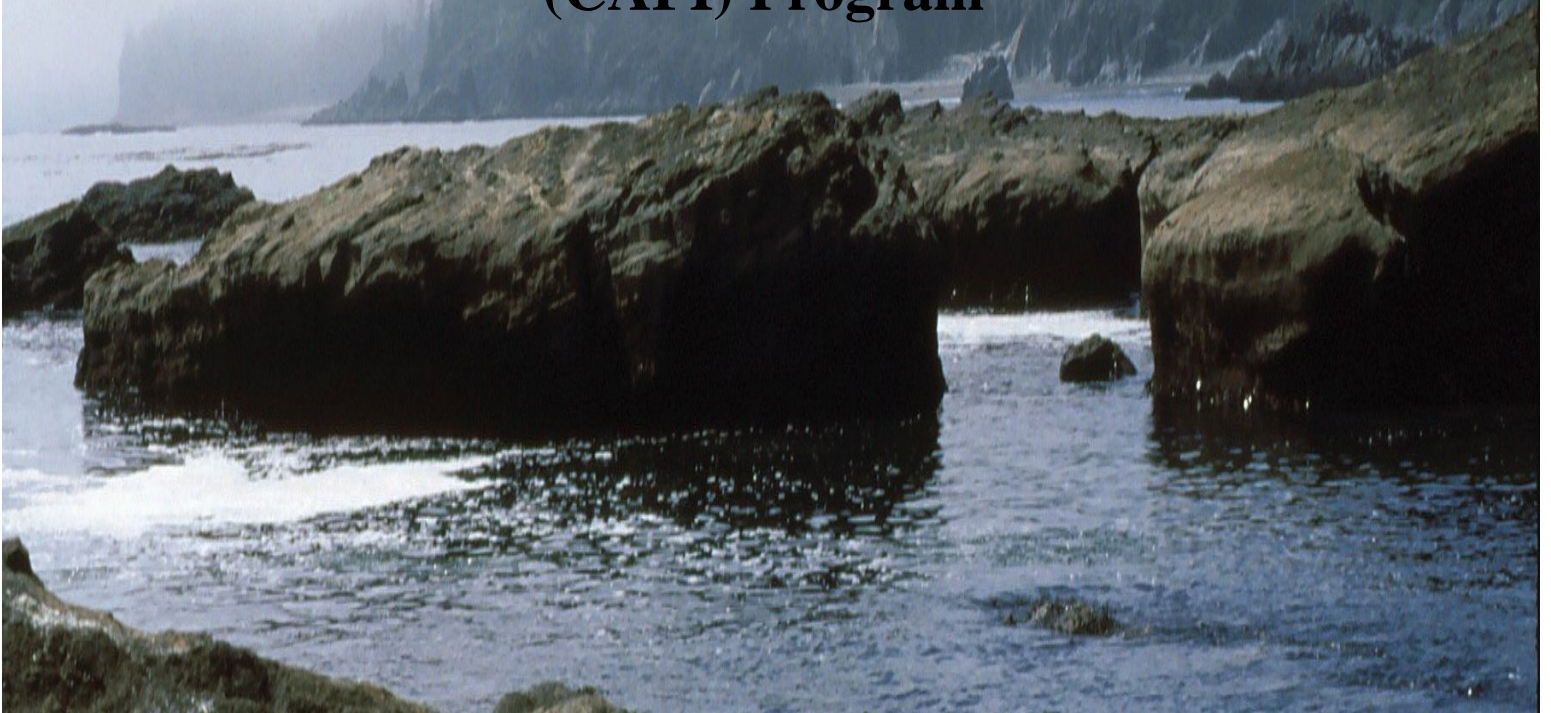
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Sea Urchins From Canada

Canada Agri-Food International (CAFI)

Initiative

Annual Project Report 2007/08

1.0 Introduction

The Pacific Urchin Harvesters Association (PUHA) and the West Coast Green Urchin Association (WCGUA) are industry associations established to examine fishery issues in the Red Sea Urchin (*Strongylocentrotus franciscanus*) and Green Sea Urchin (*S. droebachiensis*) fisheries respectively in British Columbia. The primary markets for each of these fisheries are in Japan and the two associations have joined forces in a joint Canadian Agriculture and Agri-Food International (CAFI) marketing initiative to enhance their market profile and the reputation of the Canadian seafood production industry as a consistent and dependable source of high quality seafood produced in an environmentally sound manner. Each of the associations represents all of the commercial fishing licence holders in the respective fishery in British Columbia. Producers from the East Coast were canvassed for their desire to participate but they declined and are not active in the program at this time although the door remains open to them in the future.

There are two main thrusts to the Sea urchins From Canada (SUFC) marketing strategy. The first is to consolidate and build on Canada's position as a primary supplier of the mid-grade market by increasing recognition and market share of BC branded sea urchin products and sales in Japan. The second thrust is directed more towards market diversification and developing additional market outlets in Chinese, European, US and other world markets.

The primary focus remains on the Japanese market(s) because of the dominance of this nation in the world's sea urchin markets, although opportunities in the US, China and the EU are also being examined. In this regard it must be recalled that globalization is forcing further integration and interdependence of national economies with each other and that the financial troubles in the US are cascading through other major economies, including Japan, China and Europe. Consumption declines in the US are expected to impact their suppliers around the world and have knock-on effects on economic performance and consumption in other countries and are therefore outlined and discussed.

All of the components undertaken are classified as generic Market Development/ Promotion activities, in that they focus on gaining recognition and building markets for the BC industry as a whole - looking at the general production of the association membership as opposed to that of individual companies.

2.0 Global Outlook

The deteriorating economic situation in the US is going to have wide impacts around the world simply because of the dominance of the US as the world's premiere consumer market but this is not necessarily bad news. After an unbroken period of growth around the world over the past 15 years or so, this sort of event may just be what is needed to address the imbalances in resource allocation patterns that have emerged over the years so more balanced, equitable and sustainable growth can be realized in the future. It is worth recalling that one of the major strengths of the capitalist system is the creative destruction seen periodically as resources shift from less to more valuable endeavours. Economic activity the world over has been becoming more integrated through globalization and a slowdown which allows re-calibration of resource deployment may be not only necessary but also very encouraging, particularly given the red-hot, and accelerating, pace of technological innovation these days.

The high dollar policy in the US has served as a kind of developing world Marshal Plan and has resulted in the creation of a billion new up-and-coming consumers whose wages and living standards are rising (Taylor 2007). US manufacturing was pretty much ravaged over this period but the resulting competitive pressures forced constant innovation onto the stage to a degree that has subsequently made productivity growth in the US economy the envy of the world. The country has one of the most efficient service economies in the world, impressive transportation infrastructure, sophisticated financial markets and an often reckless dynamism that together make the US very tough to keep down for long (McKenna 2008). The decline of the USD is making US manufactures more competitive so trade and investment flows are turning in their favour. Even if the carnage is not complete, the US will soon rise again from the ashes of this downturn as accelerating technological innovation forces a resumption of economic growth.

As a result of this Marshal Plan, economic and technological advancement is spreading and more people around the world are seeing the benefits and one of the biggest challenges we face is figuring out how to feed the billions of new middle class consumers in India, China, Russia, Brazil and other emerging countries. As these people get more disposable income they are increasingly demanding higher value foods that westerners have been eating for decades, including and perhaps especially, meat and seafood. As a result production of these and all the resources and other inputs needed to support their output, must be expanded dramatically (Heinzl 2008), particularly as the process is still just getting started. The opportunities in this trend are immense, especially for any producer of high quality sustainable food in this growing global market are positive, but the downside of failure is likely to be similarly extreme.

Over the longer term, the world's average fertility is projected to fall below replacement by 2025 after which population will level out and then embark on a slight decline for the foreseeable future. In some ways this is good news but there will be problems of adjusting, problems that are already being experienced in central and eastern Europe from Germany to Russia, the northern Mediterranean and parts of east Asia, including Japan and South Korea (Anon 2007 I). Most significant perhaps will be the shrinkage of the twenty-something workforce. In Japan, this group is projected to shrink by about 20%, from some 16 million to 13 million, in the next decade. There will be problems no doubt, but solutions through innovation and technology are likely.

The Geneva-based World Intellectual Property Organization reports that the US remains the world's innovation powerhouse as judged by the number of patent applications but also that South Korea and China are making enormous strides. Approximately 33% of the 156,000 patents filed in 2007 were from the US followed by Japan in second at 17.8%, Germany at 11.6% while South Korea overtook France to take 4th place. China rose to 7th place after filing 38% more applications than in 2006. The growth in patent filings from this part of the world is impressive and confirms a shift in the pattern of innovation in the world (Reuters 2008).

In this regard it may be worth mentioning that the number of US patents in recent years may have been inflated somewhat because laws governing the patent office were too lax. The US Supreme Court has recently raised the bar on the novelty, usefulness and, most specifically - the non-obvious nature of an innovation required to qualify for a patent. The third feature has not been rigorously enforced in recent years and the system has become bogged down in applications not actually deserving of protection. The court decided that advances which occur in ordinary course, for example the combination of two existing technologies, often do not involve real innovation and do not qualify for patent protection (Anon 2007 i). This ruling is expected to reduce the number of trivial and/or dubious patents worldwide and limit the opportunities for patent trolling firms seeking treasure through litigation.

Recently expressed hopes that the US economy is no longer the pivotal economic engine of the world economy upon which all other nations depend are losing their lustre. It is true that globalization has shifted increasing manufacturing capacity to the developing world and that the resulting industrialization has driven emerging market out-performance, but the whole structure remains dependent on demand from advanced economies for the goods produced. There is very little evidence that the developed world has ever decoupled from the US economy and fully 90% of the demand from the developed world is poised for a slowdown in 2008 as the US economy cools. Emerging economies will be somewhat affected because they still lack sufficient domestic demand to compensate for sluggish exports but global economic growth is projected continue at a slower pace, declining from 4.3% to 3.6%. Many developing countries have much improved their fiscal, monetary and currency policies and positions in the past couple of decades and are likely to weather a US-led economic shock without descending into crisis (Parkinson 2008).

Asia's financial exposure to the sub-prime mortgage mess in the US is thought to be less than many other regions of the world but some countries are more exposed through their exports than others. Singapore, Hong Kong and Malaysia are most exposed with exports to the US equal to about 20% of their GDP's, while China and India come in at 8% and 2% respectively. Their exports to Europe have increased more dramatically in recent years but there is some worry that flagging demand from Europe in response to the US problems may cascade through to countries directly insulated from the problems. China's growth barely slowed in response to the 2001 US recession whereas Hong Kong, Singapore, Taiwan and Malaysia all suffered full blown recessions with growth falling more than 10% from peak to trough (Anon 2008 d). This meltdown was not due to the loss of export sales, but rather to the impact of excess debt and capacity, on investment, particularly in electronics which was at the heart of the recession. This time around, capacity utilization in Asia is much higher, balance sheets stronger, real interest rates lower and foreign reserves much higher and the impact(s) in the region are projected to be much less severe this time around.

Japan's export-led economy still relies heavily on America and concern over the effects of a US slow-down on Japan is rising. The Japanese stock market was one of the first and hardest hit when the crisis broke and the political establishment does not appear to be fully facing up to the weakening economy. A number of government initiatives do not appear well thought out, including, for example, measures taken last year to control predatory lending that all but destroyed the consumer finance industry or the government's response to a scandal which saw architects faking seismic proofing data which actually knocked off 0.6% off GDP growth as the new building approval process collapsed. Hopes for sensible policy have vanished since the opposition seized control of the upper house last year and the current ruling coalition has exhibited a distinct lack of courage to pursue needed reforms (Anon 2008 e).

Asians are now the biggest consumers of luxury goods. While demand for luxury grew by 10 - 20% in 2006, growth in Asia was stronger with China marking up a 50% increase. The Chinese market is particularly interesting as it has 120 million consumers who can afford to buy luxury wares and, while showing off was frowned on in China in the 1990's, young Chinese now love to flaunt their designer labels. Double digit growth in the luxury bracket is projected to continue for at least the next few years (Anon 2007 c).

Information and communications technology is changing the way in which we all view the world. Ideology and historical experience have intensified America's sense of threat and tempted their leadership with overreach when danger has loomed in the past. For example, American policy making towards the USSR defined the second half of the 20th Century and they missed a number of opportunities to pursue a less confrontational and lower risk course because they refused to acknowledge alternative interpretations other than the dangers present during at least some periods of tension. The same observation might apply to the rise of China in the 21st Century. Even as China's export prowess is misrepresented by some US commentators, so too is China's intellectual, cultural and diplomatic influence underestimated. By viewing China's rising power in largely coercive terms, perhaps as a military mindset is wont to do, while it is actually growing most rapidly in economic and intellectual domains, the US, through its government, will end up playing the wrong game on the wrong field with the wrong team (Ziegler 2007).

The advice that a crisis is a terrible thing to waste as it makes unthinkable change(s) suddenly possible (Anon 2007 d) would seem to be worthwhile to repeat to virtually any brand of politician these days. All too often facts are ignored by politicians because they do not fit in with the agenda they are pursuing. There has, for example, been considerable moaning about the effects of gas subsidies in developing countries on transportation costs in OECD countries when, in fact, motorists in most Asian countries, including China and India, pay more for gasoline than motorists in the US (Anon 2008 j). The advice here is that critics blaming China and India for the rising global energy costs would be better advised to look at all countries, including the US.

The same tempers the interpretations presented officially and through popular media on developments in other nations. For example, an analysis of the motivations driving Russia's foreign policy reveals the country craves respect on the international stage as an equal to leading western nations such as the US and Europe and that it has no desire to be a junior partner to the West (Anon 2007 o). Given the endowment of natural and human resource riches in the country, this would strike many as a fair aspiration. This view is however, more or less overlooked in

most media reports which seem to focus more on how different and even alien they are, arguably falling back on the same old “tribal” tactics that have been used forever to claim and justify political authority.

Luckily we have progressed, or perhaps more accurately, are progressing beyond this and more people seek to inform themselves independently of the popular opinion. We now recognize our actions have global implications and, in this regard it is worth recalling that deliberately undermining the stature of any person, group of people or nation, especially if built on an embellished or arrogant self assessment, is likely to draw only resentment, resistance, derision and conflict. A much better and more reasonable option is to fall back on the Golden Rule.

To paint countries like China as aberrant with regard to corruption is to ignore reality in any situation where unbridled ambition is rewarded by the prevailing culture, whether this is national or, as is more often the case in the Western world, corporate. Ethical lapses and corruption are found in all countries. Even today in the US, the 2007 National Business Ethics Survey found 56% of the 2,000 randomly-chosen employees surveyed had witnessed ethical lapses and that 42% of those did nothing to report them (Karakowsky 2007). The school of hard knocks has demonstrated time and again that the best, and perhaps the only, defence against widespread corruption and incompetence in society remains an informed and engaged populace and a free and vigorous press, all other methods have thus far proven inadequate. Few are the countries that genuinely and completely reflect this ideal.

Still, some countries are definitely worse than others. Despite a clampdown, corruption remains a formidable problem in China where, as in many other countries, the mentality of graft is deeply ingrained. Lower level dealings involving relatively small payments are fairly common and seen as a socially acceptable way to augment earnings. Still, it is a mistake to simply impose Western ethical standards on China, or for that matter many other countries such as Russia, because they face unique, and in some cases extreme, circumstances which they can only effectively address through their own cultural set of beliefs. In China, Confucianism puts loyalty to family and friends first. Then comes “face” and finally compliance with the law, something which is seen in China as malleable as opposed to absolute. The law against commercial corruption is rarely enforced and even when it is, the resulting prosecutions, again as in Russia, usually have additional motives (Anon 2007 r).

The legal philosophies underlying the regulatory regimes of Western and Eastern nations are very different. Western traditions are based primarily on concepts of fundamental individual rights and freedoms dating from the Enlightenment whereas freedom of action in countries with Confucian traditions is based more on a “grant of benefit” from the state (Anon 2008 c). In this approach, government has an absolute Right (and obligation) to regulate all aspects of social (and business) relations for the common good. This explains why these countries have no jury system, no right of appeal and so on, in stark contrast to Western legal traditions where all of these exist, and why companies are often ordered to shut down, in whole or part, either temporarily or permanently, for transgressions that they would simply be fined for in the West. Such suspensions are being used more frequently in Japan.

Holding people, and nations, to account for actions which contradict their public positions is no longer simply best left in the province of governments. Effective action is increasingly falling to individuals because they are not so constrained by the multitude of often conflicting agendas and priorities which too often afflict governments. Konstantine Kosachev, a leading parliamentarian on the Foreign Affairs Committee of the Russian Duma, stated categorically that Russia has decided it must respect western norms on values including adherence to the Rule of Law, Democracy and Human Rights and that in no way do Russian sovereign interests contradict other Western interests. That Russia wants to be engaged as an equal in finding solutions to the problems we all face as humanity is a very good thing from the perspective of the West. However, it is still apparent that they, like a number of other countries, could use a few nudges to remind them of some of the lessons offered by history with regard to the consequences of , and the political art of defending against, abuses of power.

The experiences of the US and/or Canada and/or Britain etc. are all in agreement in this regard and there is no real need for Russia, or China or any other country for that matter, to have to rely on that same school of hard knocks to take advantage of those lessons. Neither are developing countries unique in the need to remain vigilant against such abuses. Recent events demonstrate that even developed countries which have formal protections built into their democratic institutions and laws can see them suborned to agendas which would not survive public scrutiny.

2.1 Economic Update for Japan

Japan remains unique in many ways for an advanced society. By virtually any measure, trade, tourism, foreign students, immigration and/or cultural exchange etc., Japan remains the least globalized of all the rich industrialized democracies (Anon 2007 k). Even it's immigration policies are restrictive even though its population is falling by about 0.6% per year and will shrink from its current level of 127 million to below 100 million by 2050 (Anon 2008 h).

Japan is one of the leading nations when it comes to demographic trends. The population in Japan has been shrinking in absolute terms since about 2005 and rural areas are bearing the brunt of the decline as their young people are increasingly leaving for the bright lights of the city as soon as they get the chance. This is already the reality in some rural communities where industries like fishing and agriculture are running into trouble because they are no longer able to recruit young workers. This is jeopardizing the economic viability of not just the companies but also the communities as the business activities and the accompanying tax revenues dry up (Anon 2007 m). It is hard to avoid the conclusion that a shrinking workforce supporting a growing army of retirees is eventually going to add to budget strains all around and by 2030, Japan will have only two working age people for each retiree. This ratio will rise to 3:2 by mid-century.

2.1.1 Political Paralysis

Japan was on the brink of financial meltdown 10 years ago and was afflicted with a dysfunctional political establishment unable to deal with the crisis. Junichiro Koizumi took over as Prime

Minister in 2001 and forced through political and economic reforms that appeared to set the stage for enduring financial strains and disruptions. These succeeded in weakening special interest groups, including farmers, construction firms and senior bureaucrats, which had held the ruling Liberal Democratic Party (LDP) in thrall over the past half century and forced banks and companies to clear up piles of bad loans and share cross-holdings. As a result, the Japanese economy was again growing by 2002 and there was broad consensus that the country was well placed for continuing economic modernization by the time he retired in 2005 (Anon 2008 h).

Life has, however, gotten in the way of these plans and Japan is again being characterized by its amazing ability to disappoint. An ignorance of pocketbook issues stung prime Minister Abe as the party lost its majority in an election for the Upper House at the end of July 2007. His concentration on esoteric issues, most particularly his aim to revise the pacifist Constitution to allow a more activist defence stance, led to his downfall. Calls for Mr Abe's resignation were heard immediately and there were predictions that Japanese politics would soon fall back into stalemate (York 2007 a). This appears to be the what is happening but it may ultimately turn out to be a good thing if it is a step towards a more authentic multiparty democracy.

The resignation of Mr. Abe in early September, ostensibly brought on by exhaustion, stunned the LDP and upset planned succession plans. Yasuo Fukuda stepped in as a brokered alternative to the expected designate, the Foreign Minister under Mr. Abe, Taro Aso, because many members were angered by the timing and abrupt surprise caused by the whole affair (Anon 2007 p).

The stock market is falling, foreign investors are fleeing and political chaos has forced the resignation of one Prime Minister, Shinzo Abe, and weakened his successor, Yasuo Fukuda, so he retains only a tenuous grip on power. Political paralysis has again derailed policy formation and needed reforms to trade and competition are no longer even being considered. A glimmer of hope resides in a group of cross-party modernizers seeking to break the links between power brokers and 'pork' providers and the chances that the current government may soon fall (Anon 2008 i). The hope is that voters will hold the parties feet to the fire and force the adoption of needed reforms.

2.1.2 Economic Growth

Japan's economic recovery started 6 years ago but has remained almost solely dependent on exports. The indicators are fairly widespread with even commercial property inflation turning positive for the first time in 16 years. Prices plunged by as much as 80% in two years when the property bubble burst in the late 1980's and foreign companies started buying distressed properties from heavily indebted banks and firms in the late 1990's. Commercial property values rose by 1% nationwide, including by about 10% in the 3 biggest cities, and there seems to be additional room for growth provided global credit markets do not totally seize up (Anon 2007 b).

Despite these positive signs, Japan's economic performance in 2007 was disappointing with GDP growth of only 1.3% for the year while equities declined by 18.7% in 2007 in Canadian dollar terms (Jackson 2008). The Bank of Japan held its benchmark interest rate at 0.5% until the

fourth quarter and downgraded its assessment of the economy for the first time in 3 years. The strong yen has hit exporters, high energy prices are stifling consumer spending and domestic real estate remains in a funk. Japan is one of the fastest aging societies in the world, a condition which may support fish and seafood consumption in the country as older consumers continue to seek healthier foods (DFAIT 2007), but it will also increasingly sap the growth prospects of Japan's economy.

A certain degree of lethargy apparently still affects parts of Japan's service economy. For example, department stores are about 25% less efficient than their counterparts in the US, mainly because they have been slow to adopt clever IT systems to streamline purchasing and improve logistical performance. This runs counter to the reputation of Japanese business with regard to its innovative technological prowess (Anon 2007 f). The government is aware of all these problems, but, even having acknowledged the need for financial and regulatory reform, continues to drag its feet in its response. Consequently Japan is seen squandering its reputation for technological leadership and perhaps its relevance as a global economic superpower (Jackson 2008).

Deflation reasserted its hold on Japan over the year ending March 2007 as inflation fell to -0.3%. GDP expanded by a respectable 2.3% over this period but most of the growth came from investment and exports while consumer spending lagged (Anon 2007 j). This is troubling because there are any number of analysts who believe Japan's economy cannot actually be removed from the sick list until consumers again start spending (Anon 2007). This has yet to occur despite interest rates which have stalled at 0.5%, judged by many to signify an incredibly loose monetary policy, and which have allowed the yen to hit the lowest trade-weighted value seen in over 30 years. Japanese consumers are still among the world's most thrifty and have the largest savings relative to income in the industrialized world, but still they will not spend.

Japan still has many great companies, but overall productivity in the country is pitifully low and the economy remains vulnerable because of its dependence on exports, particularly to the troubled US market, for its continued health. Some 70% of the workforce, accounting for about 50% of manufacturing by value, are employed by small or medium sized enterprises. Many of these boast world-class technology which enables big firms to succeed but most are in some distress because of pressures brought by the big firms forcing them to reduce costs and accept lower margins. In fact, much of the profit realized by big exporters since the economy started rebounding in 2002 has come from squeezing their smaller brethren (Anon 2008 l).

This extends to other aspects as well. The solidarity of the population and Japanese companies is no longer a given as the most profitable exporters continue to hoard their cash, preventing the spread of the benefits they have seen over the past 5 years through to their employees, to consumers and therefore to the wider Japanese economy. As perhaps another sign of the pressures affecting Japan since the early 1990's, the jobs for life mentality that has defined much of the Japanese labour market as it industrialized over the past 9 decades is in swift decline. The lifetime commitment between company and its employees is fading by mutual consent and necessity. The system worked very well when it came to fostering solidarity, consensus and egalitarianism but it fell down badly when it came to individual incentives, responsibility and performance. Pay schedules at most Japanese companies are based solely on seniority meaning wages stay low until an employee reaches 50 at which point it increases rapidly and, traditionally,

the actual value of the work being performed is not a factor. This system no longer works to advantage in today's technologically driven age simply because higher level, more productive workers do not generally get better pay than their mediocre co-workers (Anon 2007 m).

Companies were forced to scale back employee benefits dramatically through the 1990's because of the woes in the Japanese economy and more companies started using short term and part time contracts, which are generally paid about 40% less than full time employees, to reduce their labour costs. The trend is now entrenched and the implications are likely to reverberate throughout Japanese culture. Today's young, modern professionals are refusing to make work the centre of their lives and are refusing to sacrifice their own interests, including family, and individuality to company priorities in exchange for the stability offered by the promise of lifetime employment and the many perks that went with it. In fact, only about 25% of recent Japanese university graduates seek and obtain 'traditional' employment in large Japanese firms, as opposed to the 90% or so in 1960. The coercive powers of the workplace to enforce conformity, pervasive in past years, are in fast decline but so is economic equality.

The country is becoming less egalitarian and yet, perhaps less driven as even the national government is pushing the idea of "work-life balance" (Anon 2008 b). Along with the declining employee loyalty to the company, there has been an increase in insider tipoffs of problems within the company, especially since legislation to protect whistleblowers was enacted last year. For example, calls to food safety lines increased from about 100 per month to 700 per month since (Anon 2008 f). Information on tainted or poor quality food is increasingly likely to be publicized and it is consequently becoming more important to consistently meet or exceed all the quality expectations or suffer the consequences.

Japan has been hit with a number of food safety and false labelling scandals that is threatening its image as a country of squeaky-clean factories and impeccable sanitation (Tabuchi 2007). Japanese consumers have long favoured domestic food production because they believed it was so much safer but this belief is now badly shaken. Persistent price wars in Japan's food industry have squeezed profits throughout and led to corner cutting, especially smaller firms. Suspicions over the authenticity and safety of even favourite dishes such as sushi and marbled beef have emerged with the latest scandals (Tabuchi 2007). Emphasizing enhanced Quality Assurance Program measures in communications with buyers and consumers may be now particularly advantageous.

2.1.2.1 Japan's Equity Markets

Japan's publicly traded financial markets have been hit hard by the sub-prime and asset-backed markets in the US. The Nikkei fell by 9% in a week in mid-August and had not recovered to its January 1 starting point by September. Part of the reason behind this is the prominence of exports to the US in Japan's economy. Each percentage drop in US consumption reduces Japan's GDP by 0.43% (Anon 2007 e). While growth in exports to Europe and China more than offset the decline to the US, the US remains the end-market for many of the goods shipped to China, again suggesting the impacts from a slowing US economy could cascade through to Japan's other export markets. Domestic spending has not taken off because, even though employment has

grown, wages remain stagnant as cash-rich companies hoard their profits, something that is unlikely to change now that higher energy costs are eating into their margins (Anon 2008 e).

The situation has been complicated by the rise in the yen as hedge funds have unwound their positions in the carry trade. This trade uses yen borrowed at the very low Japanese rates (~0.5%) which are invested into higher yielding instruments including the US treasury bonds (@ ~ 4%) for easy profit. As the yen rises though, repayment requires selling more US dollars creating a vicious circle where margin calls further increase demand for yen, driving up its value some more etc even as the dollar declines. This sensitivity to the US crisis occurred because of the participation by foreign companies in the Japanese stock market. Foreigners own 30% of Japan's listed shares and, because Japanese investors and institutions tend to hold their shares, account for about 60% of all trading (Anon 2007 e).

Japan's establishment continues to rebuff foreign activist investors and continues with its paternalistic view that shareholders are generally fickle and irresponsible, especially with their greedy demands for rising dividends. For their part, foreigners are becoming more vocal in their criticisms of Japanese business management because of sharp falls in the stock valuations. Japanese companies still consider themselves social institutions with a duty to provide stable employment and consider the needs of employees and the community at large as opposed to simply the shareholders as is held in many other western countries. Activist funds are not anticipating immediate results from their campaigns but they are setting the table and hoping for better results when domestic shareholders jump on board at annual meetings generally scheduled for June (Anon 2008 a).

2.1.1 Japan's Seafood Market

Japan is Canada's second-largest export market for seafood after the United States and accounts for more than 10% of Canada's total fish and seafood exports. The country remains the largest consumer and importer of fish and seafood products in the world and the market is still growing. Per capita seafood consumption declined in the country from 35.7 kg in 2003 to 34.5 kg in 2004 but the total value increased by about 5% in 2005 over 2004, rising from about \$C 98 B in 2004 to \$C 104.5 B in 2005 and projected to reach \$C 141 B by 2010 (DFAIT 2007).

Consumers are purchasing less seafood directly from retailers, and are consuming more through the food-service sector and through consuming ready meals (e.g. boxed meals, rice balls). This is attributed to an increase in the number of single-member and two-member households and in the number of working women all of which tends to favour convenient meal solutions and less cooking from scratch (DFAIT 2007).

2.2 China

China remains a major wild card in all of our economic futures. 300- 400 million peasants have moved from dirt poor farming regions to the relative prosperity in the cities over the past decade,

in essence driving a frantic urbanization that has transformed the Chinese economy. There are still 800 - 900 million people living in rural poverty so the urbanization is expected to continue for the foreseeable future. Shanghai is the leading urban light in China and its current population of about 20 million people is projected to double over the next 20 years (Powell 2008).

There are of course sociological problems that come up with these sorts of moves. The population is becoming increasingly polarized between the haves and have nots and, as seen in North America in times past, a rapidly expanding middle class with the resources to afford it, are moving out of the cities to suburbs in waves as the cities become more crowded and expensive. The scale of this migration is, like many developments in China, nothing if not immense. In Shanghai alone 5 million people are expected to move from the city proper to surrounding suburbs where some 2 million homes are either under construction or planned over the next 10 years, and the same is happening all over China (Powell 2008).

There are some 17 million migrant workers on these projects and, while they represent only about 15% of the migrant worker population in China, maintaining the pace of construction is considered critical to maintaining the social stability so craved by all in China. These workers are not likely to ever be able to afford any of the units they are building and the system is set up as a sort of floating factory with the crews moving on to another site as soon as the one is complete. Working conditions are characterized for many of these migrant workers as Dickensian, but China is, in effect, compressing the social change seen over more than a full century in North America since the dawn of the Industrial Revolution into a couple of decades (Powell 2008).

The move of newly affluent Chinese to suburbs on the fringes of the country's megacities is similar to migrations that reshaped North American societies since the end of WWII but the scale dwarfs the experience seen in North America. This might be expected when comparing their populations as China has approximately 1,300 million people, vs about 350 million in the US and Canada. China now has 49 cities with more than 1 million people compared with 9 in the US. As might be imagined, this new migration has dramatic and global economic implications and the effects are only just starting to ripple across Chinese society and world markets.

One of the more obvious is the persistent strength of commodities such as steel, copper, lumber and oil which is attributed largely to the exploding construction. The number of people still waiting to move up in China and the pace of development means that Chinese demand for raw materials is expected to be strong for decades. In the current situation, any slowing of demand in the short to medium term in the US will be offset by the voracious appetite of China for many commodities (Hoffman 2008). Another, perhaps more subtle, effect is that new suburbanites are, like their North American counterparts, similarly stocking up with 'stuff' once they move in simply because the new suburban houses are on average at least twice as large as those in the cities. Shopping malls that would fit in any North American suburb are popping up all over and companies from all over the world are benefiting as they fill up with typical wares including consumer electronics from Panasonic, Samsung and Sony, fast food from KFC, Pizza Hut, Starbucks, fashions from New York and Europe and, most importantly from the perspective of this report, more expensive meat and seafood.

Glitnir Bank, an Icelandic investment bank with significant expertise in the seafood business, has determined that China is now both the largest seafood producer and the largest seafood consumer in the world. In terms of production, China alone currently accounts for some 35 percent of total seafood output. Annual per capita seafood consumption in China is currently 26 kg and is expected to increase by 40 percent over the next decade. Canadians and Americans, by contrast, eat an average of between 9.5 kg and 7.5 kg. of seafood a year (Glitnir Bank 2007).

Rising inflation in China may lead to higher inflation in the global economy as fears about an overheating economy there are fanned and inflationary expectations are translated into rising export prices over the next few years. Overheating is seen in rising producer prices, soaring property prices, rising wages and a rapidly expanding money supply. China has considerable pricing power in many of its export markets, because of its dominance, and the country may shift from a deflationary force to an inflationary force if it cannot get inflation under control. General inflation in China was reported at 6.5% in October 2007, the highest in 11 years, with food being the largest contributor (York 2007). Food prices soared by 17.6% year over year in November 2007 led by a 55% increase in pork prices because of losses to disease, 34% for edible oils because of reduced crop sizes and 30% for vegetables because of poor weather. Millions of low income Chinese are feeling the squeeze but the government is relying on farmers to increase production and is hoping it can withstand the inflationary storm in the meantime. The government is constrained from more aggressive reactions because of the overarching desire to maintain economic and social stability, particularly in the period leading up to the 2008 Olympics (York 2007).

The number of internet users in China has reached 210 million, a figure up by more than 50% in the last year and, because only 16% of the population is currently using the internet, one which is expected to keep growing brickly for many years to come (Anon 2008 g). More than 70% of users are under 30 years old and there is enormous pent up demand for entertainment, amusement and social interaction. Multi-player games which are accessed by subscription are very popular and growing quickly.

China's government has historically been repressive when it comes to sharing information and entertainment with the public and the Chinese internet remains tightly controlled, but meeting the demand of the Chinese users remains a very attractive opportunity for companies able to deliver. Operating margins are reported to average 28% in China, as compared to the 15% found in the US, and growth in internet firms has seen a doubling of value every year since 2003 to over USD 50 Billion today (Anon 2008 g).

The internet is widely used in China to distribute pirated films, music and TV shows as well as to provide mobile internet content, such as ring-tones, jokes and pictures, to mobile phones. Each download costs only a few cents, but given that China has 500 million mobile phone users, more than the US, Japan, Germany and Britain combined (Anon 2008 g), the revenues soon add up.

Despite the loud claims to the contrary, China's growing economic power is derived less from being a seller of things than from being a buyer, an investor and a provider of aid. Imports mean you are attractive to others and that other countries need you more than you need them (Ziegler 2007). America's focus on exports misses the point, and in fact misrepresents a major strength

defining the indispensability of the US to the world economy as a weakness. Economic governance in China remains an issue, especially as their interest rates are still far too low by a number of measures. The Central Bank in China must get approval for all interest rate adjustments from the State Council and it is unlikely that more discretion or independence from political meddling will be possible for monetary policy makers in the near future. This is presenting a number of risks to the Chinese economy as they encourage higher levels of borrowing by companies for projects with marginal returns even as the low return on bank deposits fuels asset price bubbles as households seek higher returns by buying shares and property (Anon 2007 a).

2.3 Russia

Canada is an inseparable partner with Russia in the stewardship of a good chunk of this planet, including most of the Arctic, a fact that, in and of itself, lends great consequence to our relations (Westdal 2007). Despite this, coverage of Russia and political trends in the country by Canadian media generally infers that the country is being led back to fearful oppression at home and aggressive confrontation with Western interests abroad. This may sell newspapers, but it does not reflect the reality of Russians who widely believe that Mr. Putin has actually led Russia from a state alarming disorder, despair and derision to stability, progress and respect (Westdal 2007). Perceptions matter, not least because they can so easily become self-fulfilling prophecy, and continuing misrepresentation is not likely to entice more cooperation or collaboration despite the high stakes involved.

The democracy implanted in Russia in the 1990's was horribly flawed, not least because it and all of its appendages were so patently in the service of mercantilist oligarchs, and the public now stands firmly behind the government's efforts to regain control of key natural resources which they almost uniformly consider the birthright of the Russian people. The justice being dispensed may be rough, but it is also very popular in the country. The problems facing Russia remain daunting and imposing Canadian limits on fair or legal governance in Russia would not likely lead anywhere but to disaster. President Putin is, when judged by objective standards of achievement, a very accomplished leader and the best one Russia has had in a very long time (Westdal 2007).

This being said, there are more than just a few things to worry about when it comes to Russia. For one thing, business is never just about business in Russia. Instead, it is as much about the raw exercise of power by the Kremlin, its powerful bureaucrats and the President (Pitts 2007) as they manipulate events and control which corporate blocs get access to resources in the country. The consequences of being on the wrong side were demonstrated by Yukos and that company's president, Mikhail Khordokovsky, which have, respectively, been dismantled and sit in a Siberian jail for fraud.

It appears that the government is trying to create a unique Russian model that, on the one hand, discards the command approach of the Soviet era but which still relies on large state-controlled enterprises to direct the economy (Pitts 2007). There are of course problems with this model, not

least of which revolve around unsound governance and therefore hard-to-avoid pressures for corruption. However but many Russians remain basically ignorant of how economics actually works because of the previously pervasive communist interpretations and many now fervently believe that Vladimir Putin has delivered the economic prosperity now affecting so much of the country. This is actually part of the myth propagated by the government over the past 8 years that the steady, but firm, rule by Putin, including crackdowns on opposition parties, NGO's and media outlets, has been solely responsible for rescuing Russia from economic collapse and international pity (Armstrong 2008).

Part of the story is true- many Russian workers are now more prosperous than ever. However there is also considerable evidence that the recovery in Russia was already well underway in 1998 and that increasing state participation in economic enterprises since has actually retarded the country's performance. Murder rates, corruption, public health concerns such as mortality rates, low life expectancies, alcoholism and drug abuse and environmental problems etc remain unaddressed by government but the electorate is not clamouring for progress on these, at least not yet. The Russian psyche is in many ways still rooted in the Soviet past (Armstrong 2008) and most people are still not 'success' oriented, preferring stability to reform even if economic growth is slower. In many cases, they seem to simply disavow the evidence of their own experience, and at times their own misery, to maintain the popular illusion of progress and contentment. In this perhaps we can be assured that they are at heart, like us, fully human and naturally optimistic.

While family life and social order are as important to Russians as to westerners, their concepts of justice and freedom have a different set meanings (Dimpleby 2008). That the electoral system is corrupted to the benefit of the ruling elite is beyond dispute, and the extent to which their power has penetrated all aspects of governance in the country is dispiriting, particularly as they have the wide endorsement of the populace. The power of the Kremlin, resting with the President and a clique of oligarchs and former KGB officers surrounding him, is never challenged on any issue of substance. In addition, the separation of powers which define civil society simply do not exist in Russia. The Kremlin has taken control of all media of note in the country and the courts offer virtually no protection to citizens, even from arbitrary arrest and prosecution on trumped up charges (Dimpleby 2008).

Intimidation extends to the news media which has seen 13 members slain in Russia in contract-style killings over the past decade (Armstrong 2007). Critical reporting has, as a result, all but disappeared in the country with the government gradually tightening controls on the media and forcing those with opposing views to the government out of the public eye. The government does not tolerate exposure of misdeeds by its officials and critics of the government or its officials, and even groups simply receiving funding from the West, endure increased scrutiny and all sorts of intimidation including threats of imprisonment, prosecution on trumped up charges, etc.

Thus the government is able to manipulate the fears of this deeply insecure nation to the point where freedom in Russia is defined as a state of not caring for anything. Democracy and Freedom were the rallying cry during the Yeltsin years in the 1990's, a period during which the economy shrank continuously for seven years and which is now viewed only with dread. Real disposable incomes have been rising by 10% per year and the economy increased annually by 7%

since President Putin came to power and the economic turnaround has been attributed solely to the autocratic guidance of the President, as opposed to the fact it is almost solely due to an energy price windfall. The populace accepts this claim and, because it is conveniently distracted by the threats presented by US geopolitical unilateralism, embrace the authoritarianism as desirable. Many believe that “Democracy for Russia would be death” and the government is now more powerful than it was in the days of the Soviet Union. This has progressed to the point where prominent critics from Russia are convinced that the government can no longer be changed through the electoral means (Dimbleby 2008).

Consider that three out of four senior Russian officials today were once affiliated with the KGB (Anon 2007 g) and that, unfortunately, most of them have what might be considered a predictable, almost paranoid take on geopolitics and the attitude of the West to Russia. Today’s security bosses enjoy a combination of power and money without precedent in Russian history (Anon 2007 h). The oligarchs were the first to benefit from the privatization of Russian economic assets but they were largely seen as corrupt robber barons not deserving of sympathy as the new Russian elite reasserted ‘State’ ownership and control. The FSB, the successor to the KGB, justifies its privilege and prerogatives by claiming a special mission to restore the power of the (Russian) state and frustrate enemies that might seek to weaken it. They feel they are the only ones with a true understanding of the world, have an exaggerated sense of the enemy and are motivated by some degree of divine inspiration (Anon 2007h), a dangerous combination. Like any other elite, a good family heritage is highly valued and useful for gaining entry into the organization and they guard the pedigree of its members with some vigour.

Still, the fact remains that autocracies are simply not as resilient as democracies and the current government is not as efficient as their mythology would hold. Russia remains one of the most criminalized, corrupt and bureaucratic countries in the world (Anon 2007 h) and even their approach and world view is turning out to be somewhat counterproductive. By perpetually denouncing enemies on every front, they have helped turn many countries from potential friends into nervous adversaries. The longevity of the current state of affairs with Russia’s leadership is likely to be transitory, as the benefits of the economic growth are translated to high social expectations but the state of the country may, for now, require the sort of firmness, resolve and authority which appeals to the Russian citizenry.

It is true that President Putin is apparently becoming increasingly hostile towards the West, but this may simply be a consequence of a power struggle among the security chieftains, known as the siloviki, dominating the Kremlin (Knight 2007). On many occasions during Russia’s history, leadership clashes have manifest as bellicosity towards the West with few other indications. However, on perhaps a brighter note, this time around the open battle amongst the Kremlin’s clans is being waged on the front pages of independent newspapers as opposed to the secrecy seen on prior occasions. The apparent infighting may indicate the siloviki mafia, the basis of Mr. Putin’s power, is unravelling in advance of his retirement simply because his ability to balance the interests of the competing groups is diminishing. The only option for the West in this situation is to sit back and watch as any interference would be cause for further demonization.

While Western governments publicly worry about Russia taking a more aggressive stance on the world stage, official declarations from Russia at international meetings are more conciliatory.

President Putin is using whatever tools he can to restore the influence of the country, using bluster and pressure tactics particularly with regard to the eastward expansion of NATO and the European Union. There are any number of commentators that find the trends distressing but at the same time it is worth noting that the border between Russia and the EU has never been more peaceful and that Russia's relations with the West have never been more 'intimate'. Empirically, there are substantial and growing business connections and still increasing cooperation on issues of mutual interest, including linkages between Western and Russian space programs, nuclear developments in Iran, anti-drug efforts, Islamic extremism etc. The trends are not all bad, or good, but the leadership are grounded as realists and while efforts to improve relations will be required for the foreseeable future, the outlook that these will remain constructive is fairly secure (Anon 2008).

2.4 Currency Markets

Since about September 2002 the Canadian dollar has gained more than 50% in value *vis a vis* the USD. The rally in the currency continued, and even accelerated through 2007 in response to high global commodity prices so it has actually remained at close to, or even above, par with the USD for much of the past year (Figure 1). The yen on the other hand was until very recently still floating around the same band as over the past eight years. This has resulted in a combination of things: the Canadian product has become more expensive, and volume has suffered, and only part of the increase has been passed on to consumers meaning the trade in Canadian product has become less profitable.



Figure 1: Currency value comparisons since Jan. 1, 2000.

The effects of this on prices for sea urchin products from Canada can be seen in Figure 2 which sees total sales values declining by about 80% and 50% for BC GSU and RSU respectively in terms of yen even as there is a unit price increase. The overall effect on Canadian operations can be seen more dramatically in terms of the Canadian dollar in Figure 3 where the total declines are ~ 85% and 66% respectively and the unit price hikes either attenuated or, in the case of the RSU, absent.

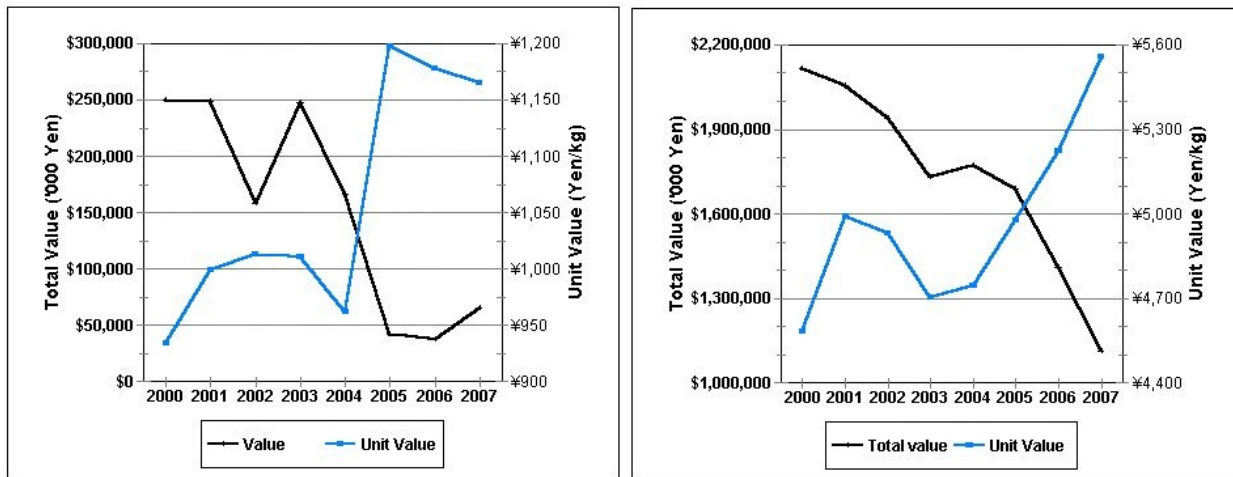


Figure 2: Total and unit value of GSU (left) and RSU (right) products from BC in terms of yen.

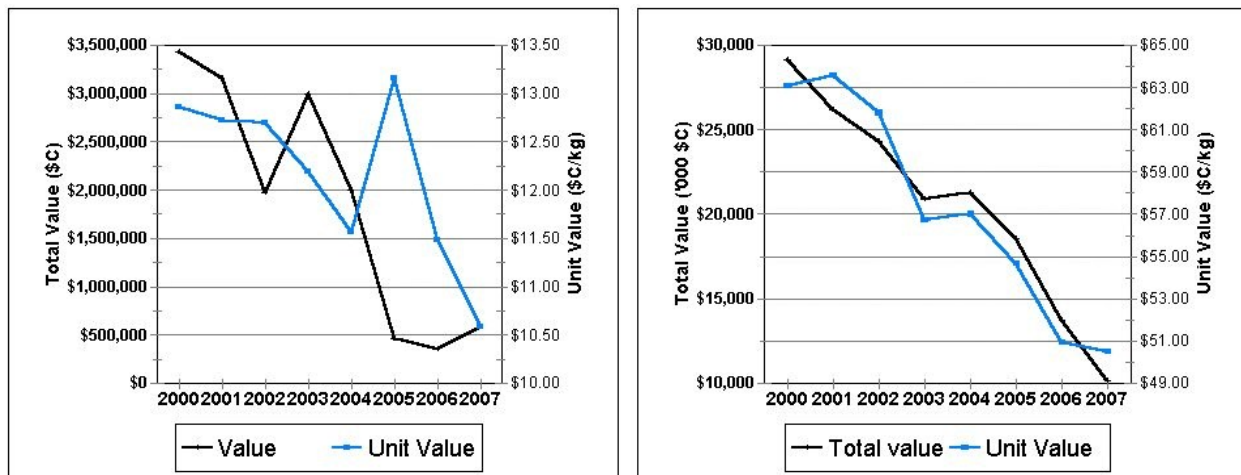


Figure 3: Total and unit values of GSU (left) and RSU (right) products from BC in CAD.

The values in Yen in these two charts were obtained from the Japan Customs website and converted using the interbank rate obtained off the FX currency conversion website (www.oanda.com/convert). Data from the Japan Customs website was used extensively in these tables and charts because it provides a consistent basis for comparing the import volume and values from the different countries looked at.

2.5 Environmental Trends

Global warming and climate are headline environmental issues these days but a more important element of the process may turn out to be associated effects on ocean chemistry. The world's oceans currently absorb about 33% of humanity's output of CO₂, or about 1 Million MT of per hour. As CO₂ dissolves in the water it is converted to carbonic acid which lowers the pH of the seawater and which has immense ramifications for marine food chains and ecosystems. Some animals are able to adjust their internal fluid characteristics to at least partly mitigate the effects but others, such as corals and sea urchins, do not have this capability. The increasing acidity directly impacts corals and sea urchins because of the prominence of calcium carbonate in their structures but will dramatically impact marine ecosystems indirectly because of the importance of these animals in the maintenance of critical marine habitat. Sea urchins are particularly sensitive in their larval stages (Anon 2008 k).

2.5.1 Sea Otters

The continuing recovery of sea otter populations along the west coast of North America is reducing invertebrate populations, including sea urchins, and threatening the sustainability of commercial fisheries depending on those species. Research continues to focus on the environmental potential of the sea otters, apparently in isolation from the economic implications. Gregr et al (2008) estimate that the carrying capacity for sea otters along the BC coast is about 52, 459, a number far in excess of the current population level of about 3,500 and a level which threatens to eliminate many, if not all, commercial fisheries on invertebrates as an economic activity in BC.

Economic progress has always required preferential diversion and use of natural resources by people. The near-shore marine communities all along the west coast of North America are actually often in a highly disturbed state simply because the major keystone species upon which the entire structure of community depended, the sea otter, was eliminated by the fur trade by the 18th Century. This allowed populations of many marine invertebrates, including sea urchins, to grow without their natural controls and the resulting unnaturally high abundances are still, mistakenly, used as the benchmark of virgin abundance in calculating harvest rates and the resulting TAC's. Areas where the ecological community structure is reverting to the natural state, defined as where all the keystone species (such as sea otters) and habitat structures are in place, provide a realistic benchmark against which the true state of fished populations and the impact of that fishing might be objectively graded. Coordinated research in BC and Alaska comparing fisheries productivity in a natural state and in areas lacking sea otters may offer insights with the potential to improve aggregate outcomes within an ecosystem based management approach.

3.0 Marketing

Traditionally, branding is thought of as positioning, advertising, packaging and catchy logos and slogans but this is no longer enough. Today branding is about the customer's total experience

with your product and is about enticing customers and gaining their trust, all the while making the experience so pleasant that they are proud of their choice and let everyone they know in on how great the product and the company(ies) involved are (Stalk 2008).

Consumers are not really a happy lot and will not tolerate much abuse. In this, consistent superior delivery on the brand promise is key. It takes time to build a good name: luxury is capital intensive and about 70% of new brands fail (Anon 2007 c). Increased advertising alone will not move sales, the brand management must focus on the outcome that matters most: those that most affect the lives of your customers. The brand experience is linked to every aspect of buying and using the product, not just the performance of the product itself (Stalk 2008).

Consumers are pressed for time, starved for affinity relationships, jaded and sceptical and short of money. Consumers learn through their experience with the product and the companies about the true heart of the companies and the people involved . This is a case of learning based on what is done as opposed to what is said. This is empirical evidence, it is indelible and success can only be predicted when companies know what they are ‘teaching’ their customers (Stalk 2008).

The Japanese yen has not been keeping pace with other currencies over the past few years and they are running into some problems sourcing seafood on international markets because stronger currencies are making it easier for other countries, such as the European Union, to outbid them on price, particularly on the premium quality category where demand is most intense. Consumers in Japan are price sensitive these days and many outlets are coping with rising prices by revising their menus and/or selling smaller portions (DFAIT 2007). 65% of Japanese consumers focus on the freshness or the degree of deterioration as the primary factor when choosing fresh fishery products, followed by place of origin and brand (33%), quality and fat content (30%), price (20%), indication of best-before dates (13%), taste (10%), colour or gloss (8%), indications such as healthy nature, natural, choice or organic (6%), and size or volume (6%) (DFAIT 2007).

Canada has a good, strong image in Japan that many Japanese companies and consumers are happy to associate themselves with. The maple leaf logo has been added to Canadian CD's in Japan since 2004 as part of an ambitious, and patently successful, campaign to create a distinctive brand in Japan (York 2007 b). The recording industry has been hit hard in North America by internet downloading but piracy rates in Japan are the lowest in the industrialized world and sales there are booming. Canadians have been the biggest selling international acts in Japan for 4 of the past 6 years and the dominance of Canadian artists such as Avril Lavigne and Daniel Powter is extraordinary.

The SUFC group decided some time ago to make dependable quality the centrepiece of their operating strategy. There are just two words to remember when considering quality of seafood by fishermen: temperature and time (McManman 2008). The key remains to get the catch as cold as possible and as soon as possible and deliver it as quickly as possible.

The cold chain is a new defined component of the value chain and the time is fast approaching in at least some fisheries that unless proof that the temperature has been controlled from the time of harvest to processing, the catch will not even sell. Most large seafood distributors are starting to demand temperature monitors within each shipment to chart the cold chain (McManman 2008), a

trend which is expected to intensify and spread as consumers become more aware and critical of the damage caused by temperature abuse.

3.1 Marine Stewardship Council

BC's urchin fisheries are going through a pre-certification evaluation for the Marine Stewardship Council (MSC), a development that would seem to be somewhat timely as Aeon, one of the larger supermarket chains in Japan, is marketing MSC product in its stores. This may be the start of a trend in Japan, but of course it remains to be seen how it develops. Getting MSC certification will validate PUHA's reputation as a supplier of high quality, environmentally sustainable sea urchin products that should open additional opportunities on both the price and demand sides of the equation.

Representatives from the Marine Stewardship Council and Surffish, a firm from Seattle which provides traceability and Chain of Custody advice to industry as part of the MSC network, to a Vancouver workshop. The Chain of Custody information will be of particular interest to the processor while the general MSC certification process will be more interesting to harvesters.

The MSC certification program is gaining more traction of late and more BC fisheries are seeking certification, if only to preserve their access to the traditional markets. There are a number of BC conservation groups, some teamed with First Nations, which are generally opposed to the certification of BC fisheries, presumably because they have doubts in the integrity of the agencies, people and/or interests involved.

The MSC process is running a bit slowly here in BC and they are having lots of problems with timing, benchmarks and performance requirements and indicators. Canadian sockeye have been in the process of getting certified for quite some time now and the reports completed on the industry are available on the MSC website. Dogfish are also in the process of getting certified, estimates to date include approximately \$375,000 for the assessment and a further \$70,000 in annual audit expenses. The MSC also encompasses aims for constant improvement and most fisheries certified are expected meet additional conditions that have real costs but which result in an even more sustainable profile. Certification often includes an explicit Action Plan to move the fishery towards even better compliance with sustainability goals. Some of these require changes by the management body (eg. DFO) so these agencies are also expected to contribute to the development of the Action Plan.

The process is new to DFO and they have thus far been a bit slow on the uptake although to be fair DFO is appointing a Pacific Region Coordinator to liaise with industry, the MSC and the certifiers working with BC fisheries representatives. As part of the pre-assessment process, the management agencies, like DFO, are required to submit a document stating that the fishery is sustainably managed. DFO is constrained in the resources they can commit to these sorts of reports and industry groups are generally required to hire a consultant to conduct said study and write the report for DFO at a cost of between \$20,000 - 50,000.

3.1.1 Fishery Certification

Deborah Tufts, a North American manager for MSC based in Seattle, provided a summary of the MSC program. The MSC is not prescriptive, it is more results oriented. It is also pretty much up to the client(s) to work through the necessary negotiations and drive the compromises needed so the certification conditions included in the final assessment satisfy all the participants and players, including the client(s), MSC, management and science and stakeholders. It is worth noting that some care is required to ensure that the fishery can actually provide the information needed to satisfy all the necessary conditions and criteria.

In essence the MSC is an “Eco-label Brand” which extracts and presents a simple message as a guarantee of sustainability from what is actually a complex and quite involved process. In the European union, 80% of Germans, Spanish and English respondents state they prefer ecological sustainable seafood. In the US 37% of those surveyed avoid purchases of seafood because of environmental concerns and of these 71% stated that they would be more likely to purchase if the product had a recognizable and trusted eco-label. The MSC was initially targeting niche markets but it is becoming increasingly mainstream, causing a bit of a kerfuffle in the marketplace.

The mission of the MSC is to ensure a sustainable seafood supplies through the application of sensible and effective environmental choices. In pursuit of this, the MSC has adopted three principles, P1: Stock Sustainability; P2: Ecosystem Impact; and P3: Effective Management, based on the 1999 document from the Fisheries and Agriculture Organisation (FAO) of the United Nations on Responsible Fishing: Principles and Criteria. The units included in the MSC certification are defined for each fishery. These include all species involved, the stock or stocks, including sub-stocks, the fishing gear(s) and/or method(s) and practices, the vessels included, the geographic location and the management system. The MSC is looking to certify the P3 elements as characteristic of the agency, in this case DFO, so subsequent reports eventually focus on P1 and P2 while P3 comprises a generic approval of DFO methods and effectiveness.

The process involves two main steps:

1. a pre-assessment - comprising a Gap Analysis and Risk Assessment designed to answer the question regarding whether the fishery is ready for full assessment including identify key players, actions, impacts and issues impeding adherence to MSC standards. This step generally requires a 1-day site visit, 1-3 months for completion of the reports involved and costs between \$5 - 20 K although these are declining somewhat with increasing competition between the certifiers.

An authorized certification body, the client and Management and Science Authorities all work as partners during this phase to summarize the fishery including identifying all known contacts and players, including DFO and conservation group contacts. Stakeholders are generally self-identified, but to have standing in the process they must engage in the process from near the beginning and stay involved throughout, as opposed to simply jumping in at the last stage to throw a spanner in the works. This might otherwise be a bit of a problem in BC, given the prominence of the conservation ethic in the province. DFO has lots of different consultation tables which can assist but there

is a group calling themselves the Marine Consultation Caucus, comprising in part the Western Canada Wilderness Committee, the Sierra Club, Suzuki Foundation etc, which should be contacted and apprised of the application as a reasonable first step to meet the MSC notification requirements.

2. Full assessment- comprising a peer- reviewed scientific report by an expert team which seeks input and comments on the reports which are published on the MSC website from stakeholders including industry, scientists and the public. An expert team, comprising generally 3 members, is contracted by the certifier. There is usually some negotiation with conservation groups to get the team together. This part of the process generally takes between 12- 15 months and costs between \$30 - 150 K. The industry group generally has opportunities to do quite a bit of the work to help get the costs down.

An information sheet from the MSC which explains the costs with the process will be appended to this Briefing. In short, in addition to the above costs there are also costs with annual fishery and Chain of Custody audits undertaken by the certifier once a fishery is certified. Each fishery is also fully re-assessed every 5 years, an assessment which also includes an evaluation of progress on the Action Plans included in the Certification. Chain of Custody elements are re-assessed every 3 years. The re-certification is basically a repeat of the initial certification process and carries a similar cost.

Certified fisheries must pay a licencing fee as well to use the MSC logo. The rate is currently set at 0.1% of the wholesale value although this will soon be rising to 0.5%. The company actually putting the label on its product, and not the fishermen *per se*, is supposed to pay but in BC most producers have taken the position that they will refuse to pay. Usually only value-added products use the MSC logo and it is actually not very common for primary processors to put the MSC logo on their product.

In 2000 there were 5 certified fisheries. This number increased to 21 by 2003, 40 by 2006 and 60 are projected by the end of 2007. Even Russia has approached the MSC to get its pollock fishery, and perhaps some others, certified. The MSC has a global network of buyers and they are looking for joint assistance in designing an eco-marketing strategy. A new and improved website is going to be on line in early 2008.

The methods used by MSC have evolved considerably since its launch in 2000. There have been 5 re-certifications thus far, 2 with no problems and 3, including the Alaska salmon, Australian rock lobster and New Zealand Hoki, that have had some. The problems have come about mainly because of some trial and error issues, particularly as the methods have been refined. For example, they used to have about 40 indicators on the P1 but these have been reduced to 7 with no discernable impact on sustainability even as the costs and time line requirements have been dramatically reduced.

There are some equatibility concerns on the consistency and comparability of the quality guideposts and standardized indicators used in different fisheries, especially when fisheries are in different jurisdictions, when the clients use different certification bodies or when different environmental groups are applying pressure on the process. For example, Alaskan and BC

halibut fisheries use the same science and actually share a common management setup but may not be judged equally compliant. The MSC acknowledges there is a bit of trial and error with the process but that they are committed to keeping everything as fair as possible.

3.1.2 Chain of Custody Certification

Gertrude Gastel from Surefish, an accredited Chain of Custody certifying body from Seattle provided a summary of the MSC Chain of Custody Certification process. This is basically a third party verification of the supply chain traceability from the time the product is caught right through to the final sale. It is a very important tool in the fight against IUU fishing and can include genetic identification of the species and eventually of the regional source.

With the MSC process the fishery must be MSC certified first. The fishery certification covers the fish up to the point of first landing. Vessels that solely harvest, such as dive vessels, long liners, trollers and gillnetters (and perhaps packers?) as opposed to processing vessels such as factory trawlers are usually included under the scope of the fishery certification.

Once a fishery is certified, all the product sourced from that fishery is eligible for Chain of Custody (COC) certification although it does not mean that all product from the fishery is automatically COC certified. For retail-ready packaging or seafood displayed in a retail counter to legitimately bear the logo, all enterprises and/or individuals owning the product since landing must be covered by the COC certification even if they do not actually take physical custody of it. Groups of companies can be given a Group COC certification as a way to reduce costs.

The Chain of Custody Certification means that company's traceability systems and physical handling systems have been verified as meeting the requirements of the MSC Chain of Custody Standard. The Certification is conducted according to the requirements of the Standard and the MSC COC method. The types of things assessed during the certification process include:

1. product tracking systems (similar to recall);
2. product receiving, storage, processing, labelling and shipping; and
3. potential risks including other species and items processed.

Hazard Analysis Critical Control Points (HACCP), SSOP, GMP's, QMP's and other regulatory items are not assessed. In some respects the MSC COC process may be a bit redundant given the prevalence of Country of Origin regulations, HACCP and Ministry of Health certifications etc, especially when international trade is involved but even then it is an international registry with consistent and transparent standards that can be traced and trusted by consumers in any country.

Any company that uses the MSC logo must have the COC certification as well. The MSC logo is coupled with traceability through a unique identification number which can be checked by the consumer to verify the particulars of that company in the program. A company can use the same MSC Certification ID number for multiple certified products. The company must also pay a licencing fee to use the MSC logo. The logo must be accompanied by a recognized and legal copyright stamp (eg. © or ®) to be legal and compliant.

3.1.2.1 COC Certification Process

The initial step involves a desktop review and report of the processes at the company. This is followed by an on-site audit where the auditor visits the locations in the chain of custody and verifies that the information provided in the application is correct. The auditor also determines if there are any other issues that might affect the traceability and/or segregation of the product. The auditor then produces a report from the audit, listing the findings and conclusions, including any non-conformance, regarding the certification status. This report is then sent to the client for review and signature. Any major non-conformance must be addressed before the certification can be issued. After the signed report is received back by the certification body, a certification which is valid for 3 years is issued and MSC notified.

When it is not possible to conduct an on-site audit, as for example when the fishery involved is seasonal and not currently operating, the certification body may ask MSC permission to issue an interim certification. This generally requires a “low risk” risk assessment. The interim certification is then valid for 90 days at which point the audit and report must be complete. Any product landed after the completion of the draft report, assuming all things are in order, can be included as certified product.

The time requirements for an audit generally plays out at about one half a day for the desk top examination, a half day for the on-site visit, and a half day for the report. If the per diem is \$1,000, the cost would then work out to about \$1,500 for each site.

Once a company is certified, further and continuing verification required by the MSC COC methodology is provided through random and planned Surveillance Audits (SA). These verify that certified companies are still meeting the MSC requirements and that there are no unaddressed or new issues with segregation or co-mingling. The frequency of the SA is determined by the Risk Analysis undertaken as part of the on-site report. These comprise:

- ✧ Reduced Surveillance- at least once every 18 months;
- ✧ Standard surveillance- at least once every 12 months; and
- ✧ Enhanced Surveillance- at least once every 6 months.

3.1.3 Certification issues for different kinds of companies

3.1.3.1 Primary Processors

Which MSC certified fishery is the client and the effect this might have on the eligibility of the primary processor for COC certification must be considered. The certification is not applicable when the fishery certification client is a government agency like DFO or the Alaska Department of Fish and Game. The verification of the certified input is generally through fish tickets or a related document. The mass balance of the operation is monitored.

3.1.3.2 Secondary/Value-added Processors

The certified input must be verified using the supplier COC certificate(s), checks of the MSC website and invoices with the unique MSC statement number. Mass balance at the plant is again used to keep track of all MSC inputs so the volume of product sold as MSC can be compared to the volume purchased. If they are using the MSC logo they must have a valid logo licence agreement with MSC and must be MSC COC certified.

3.1.3.3 Brokers/Traders

Brokers and traders must also be COC certified even if they do not take custody of the product. The certified inputs and mass balance must be verified. These generally involve only a short value chain with for example an invoice showing a company shipping product to cold storage, and a cold storage warehouse receipt showing that same company shipping.

3.1.3.4 Custom Processors

COC certification was, until recently, solely dependent upon ownership which meant that custom processors could not get their own certification and had to be assessed as part of the scope of the entity that owned the product (as per the sub-contractor clause of the MSC Standard- Section 1.3). This changed in June 2007 so facilities can now get certified for the custom processing activities including both companies that own their own product and act as a custom processor and companies that act solely as a custom processor. Under this category, the company is responsible for verifying the certification status of all product they are instructed to put their MSC certification on. This verification now comes under the scope of their certification and they must be able to show the input/output numbers for each client for whom the MSC custom processing is done. There are as yet no written guidelines from MSC on this and details are subject to change.

3.1.3.5 Co-packing

Co-packing is defined as a company which owns the product but is putting it into someone else's packaging. The co-packer must have its own COC certification as the owner of the product. The packaging may use either the COC number of the co-packer since the COC ends when it is placed into the final retail-ready packaging or the number of the company they are co-packing for if indeed they have their own MSC COC number.

4.0 2007/08 Sea Urchin Markets and Fisheries

4.1 Overview of Market Developments in 2007/08

The value and sales of BC sea urchin products in Japan remain below their potential, in large part because of a continuing focus on price by consumers as the primary purchase criterion.

Disposable incomes in Japan have not grown in tandem with the economic recovery that has been under way for the past 3 years and while Japanese consumers do appreciate high quality, environmentally sustainable products, these are trumped by price considerations. The continuing strengthening of the Canadian dollar has exacerbated the situation but another major contributing factor is an over-supply situation engendered by the Russia IUU fishery in the Kuriles. This has lowered demand for Canadian product to the point that BC's Red Sea urchin (RSU) and Green Sea Urchin (GSU) fisheries were not fully prosecuted in any season since 2004 and increasing amounts of the Total Allowable Catch (TAC) have not been fished with each passing year. The same situation currently prevails and fishing is on trend to see ~ 40% of the TAC taken this year.

The financial state of the industry reflected its poor market performance last year and virtually all activities had to be halted over the summer until a fuller picture of the situation could develop. The marketing program lost much of its momentum over this interlude but a number of meetings since September 2007 have seen the gradual re-engagement of the SUFC group in the effort. Unfortunately opportunities to leverage the trusted track records of the SUFC group and Canada for producing high quality products as part of the marketing program have not been seized. The Brand Canada initiative has been embraced by the SUFC but the efforts to leverage that reputation have been subdued over the past two years because travel plans have derailed.

4.1.1 Sea Urchin Imports in Japan

Russia is a significant supplier of sea urchin products, especially live sea urchin, to Japan. Imports from Russia increased from about 6,000 MT in 2000 to a peak of about 15,000 MT in 2006 before declining to about 14,000 MT last year (2007)(Table 1). By far the largest single contributor to this trade is an IUU fishery in the Kurile Islands which supplies between about 80 - 100% of the urchins in all except the summer months. The IUU fishery is discussed in more detail further on in this document but data collected from the Japan customs site is presented here for easy comparison with similar data on imports from Canada and the United States.

Table 1: Total imports of live Russian sea urchins into Japan.

Quantity (kg)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
2000	258,685	217,348	462,376	488,698	827,765	798,017	527,706	276,277	84,116	575,496	869,057	800,847	6,186,388
2001	356,420	386,411	287,913	962,737	1,378,412	919,232	800,908	230,420	256,725	966,887	1,308,598	1,221,156	9,075,819
2002	473,112	892,644	1,263,160	1,167,944	1,233,979	1,017,025	519,258	267,832	249,387	1,027,874	1,047,340	1,365,338	10,524,893
2003	337,043	823,473	480,915	1,221,285	1,428,003	1,208,713	606,316	477,310	395,495	1,245,766	1,281,508	1,433,693	10,939,520
2004	265,797	555,220	1,085,132	1,330,316	1,307,924	1,381,788	870,614	683,124	431,688	1,198,418	1,602,789	1,559,353	12,272,163
2005	1,230,530	1,059,195	1,132,995	1,568,869	1,496,405	1,062,342	952,031	773,132	578,971	881,068	1,598,998	1,491,052	13,825,588
2006	1,078,969	1,466,283	1,151,825	1,340,391	1,506,838	1,683,648	967,601	770,683	327,615	1,273,880	1,517,464	1,939,728	15,024,925
2007	1,348,866	740,679	1,608,850	1,384,635	1,573,253	1,392,252	739,074	532,650	301,347	1,303,546	1,221,816	1,903,874	14,050,842
2008	559,539	548,747											

Record volumes from the IUU fishery (Table 2) were imported in 2006 when 11,174 MT were recorded and a reduction of about 1,000 MT was seen last year to the end of December. The volumes recorded so far this year (2008) are lower than seen in the past few years so there is some hope that the illegal trade will soon be less of a factor, although the prices are significantly higher. There are also some apparent discrepancies in other data sets suggesting that while overall IUU volumes are declining, additional routes through other ports and/or using vessels flying other flags (eg. Georgia) may also be seeing more action.

Table 2: Russian imports of IUU urchins through Hanasaki.

Quantity (kg)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
2000	112,675	163,580	258,881	287,208	445,293	250,493	11,151	0	12,807	438,490	666,513	637,494	3,284,585
2001	297,368	379,099	246,169	731,741	869,115	398,692	163,952	0	168,009	774,832	1,176,537	1,086,316	6,291,830
2002	433,297	892,644	1,230,158	983,004	1,005,763	500,042	139,722	0	158,252	953,706	1,013,216	1,255,882	8,585,686
2003	327,004	823,473	457,798	1,153,280	1,153,733	978,157	86,429	35,282	147,323	1,171,788	1,220,821	1,294,281	8,849,369
2004	220,935	508,611	1,017,164	1,088,327	988,050	7,682	9,068	12,597	114,274	1,115,524	1,561,623	1,446,994	8,090,849
2005	1,132,616	1,040,998	1,091,899	1,286,519	1,038,319	549,994	218,510	87,776	229,474	770,598	1,462,582	1,422,941	10,332,226
2006	1,051,475	1,456,381	1,038,505	1,162,321	1,041,269	839,248	323,733	173,218	141,661	993,868	1,154,119	1,797,794	11,173,592
2007	1,303,254	731,439	1,404,136	913,289	1,048,176	734,140	262,860	48,973	52,229	778,186	990,995	1,566,803	9,834,480
2008	482,018	328,306											
Unit Value (Yen/kg)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Averages
2000	¥479.8	¥518.3	¥661.1	¥664.3	¥504.4	¥506.1	¥346.1		¥685.2	¥526.6	¥456.7	¥545.5	¥524.3
2001	¥714.3	¥756.7	¥873.8	¥644.0	¥555.4	¥499.0	¥575.9		¥550.0	¥459.9	¥474.6	¥524.0	¥562.3
2002	¥673.9	¥524.5	¥510.6	¥601.9	¥498.4	¥594.4	¥419.5		¥655.7	¥529.7	¥520.6	¥520.9	¥540.3
2003	¥661.3	¥600.6	¥705.0	¥504.2	¥439.7	¥496.2	¥493.8	¥409.3	¥549.4	¥359.3	¥397.8	¥525.0	¥489.5
2004	¥840.6	¥579.2	¥466.0	¥424.1	¥424.8	¥69.8	¥66.7	¥356.4	¥388.3	¥401.8	¥399.0	¥511.0	¥456.8
2005	¥532.6	¥395.6	¥436.7	¥438.5	¥402.4	¥377.2	¥400.2	¥313.9	¥287.2	¥406.6	¥415.0	¥522.6	¥438.1
2006	¥558.8	¥417.6	¥513.1	¥543.6	¥439.9	¥436.2	¥358.5	¥356.7	¥378.6	¥400.5	¥469.2	¥428.0	¥458.7
2007	¥478.9	¥556.6	¥595.5	¥407.8	¥477.6	¥372.6	¥385.0	¥380.0	¥462.6	¥507.8	¥568.5	¥511.6	¥500.1
2008	¥673.8	¥1,130.8											

The IUU trade impacts the BC GSU fishery most directly as can be seen from the decline from the 267 MT in 2000 to the dismal 31 MT seen in 2006 as listed in Table 3. The RSU fishery in BC was likewise, though not perhaps as significantly, impacted (Table 4). The impacts on sales and price are easy to pick out, although again the confounding effects from the appreciating Canadian dollar dramatically impact the economic effects on producers in Canada (Figure 3). In the case of the RSU, the most dramatic impact was only seen last year when shipments declined to 200 MT from the 462 MT recorded in 2000. Prices are also down in the first two months of 2008 so it seems reasonable to conclude that this season is going to be worse than last year.

Table 3: GSU import history since 2000 into Japan (Japan Customs)

Quantity (kg)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
2000	70,711	43,013	21,938						11,557	31,971	8,381	79,584	267,155
2001	102,627	25,900	28,468	11,964						9,307	7,510	63,053	248,829
2002	62,303	15,781	4,590						1,809	12,798	13,967	44,703	155,951
2003	79,134	35,874	23,967	1,433						7,969	8,332	88,653	245,352
2004	69,435	16,727	9,137							9,424	8,074	60,149	172,946
2005	6,110									3,760	510	24,727	35,107
2006	13,115									6,617	5,102	6,441	31,275
2007	1,105	2,194	14,595						4,791	13,878	9,636	9,677	55,876
2008	540	15,397											15,937
Unit Value (yen/kg)													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
2000	¥966	¥833	¥852						¥886	¥854	¥764	¥1,041	¥935
2001	¥1,046	¥919	¥938	¥806						¥864	¥915	¥1,049	¥999
2002	¥1,047	¥1,031	¥926						¥1,162	¥901	¥923	¥1,022	¥1,013
2003	¥1,028	¥1,064	¥961	¥856						¥795	¥883	¥1,022	¥1,011
2004	¥948	¥894	¥849							¥857	¥818	¥1,051	¥962
2005	¥1,159									¥971	¥988	¥1,247	¥1,198
2006	¥1,204									¥1,023	¥1,187	¥1,275	¥1,178
2007	¥1,361	¥1,055	¥1,084						¥1,177	¥1,240	¥1,201	¥1,139	¥1,165
2008	¥1,311	¥1,193											¥1,197

Table 4: BC RSU import history into Japan since 2000 (Japan Customs).

Quantity (kg)	Month												Totals
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	57,488	41,989	53,266	43,782	14,848	922	601	2,368	22,294	54,807	69,148	100,381	461,894
2001	58,943	43,010	52,295	25,834	2,754			708	15,363	51,435	59,677	101,617	411,636
2002	58,378	45,134	44,037	13,546	763			388	21,412	57,416	52,462	99,983	393,519
2003	69,532	38,244	33,851	23,944	2,186	156		72	12,598	36,468	57,042	93,637	367,730
2004	59,391	50,210	50,762	23,635	3,597	60	122	1,031	9,370	34,545	44,706	95,635	373,064
2005	51,042	41,164	38,271	33,649	3,046			1,023	13,764	28,148	41,755	87,794	339,656
2006	37,832	39,997	39,865	28,075	453		623	1,171	7,587	16,673	37,766	59,821	269,863
2007	40,658	22,960	36,029	24,403	1,884			1,926	3,732	8,342	16,655	43,861	200,470
2008	33,604	24,587											
Value (000 yen)	Month												Totals
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	249,111	211,510	222,942	190,242	66,249	3,516	2,626	11,239	100,964	246,568	312,564	499,297	2,116,828
2001	305,739	217,867	252,999	131,257	13,672			3,911	79,066	244,733	284,602	521,061	2,054,907
2002	306,306	244,727	212,423	61,704	4,677			2,243	101,953	274,251	237,247	494,206	1,939,737
2003	346,814	176,178	159,160	103,625	9,642	553		426	62,900	166,512	256,353	447,816	1,729,979
2004	295,755	228,691	229,484	106,626	15,978	236	593	5,973	46,458	166,663	210,633	463,132	1,770,222
2005	242,556	189,534	178,676	156,383	13,149			6,093	68,982	144,809	209,576	480,309	1,690,067
2006	192,912	204,575	202,409	139,992	2,464		3,125	7,407	29,443	88,043	199,693	339,465	1,409,528
2007	226,184	119,523	196,559	127,142	11,901			11,821	22,322	49,168	98,284	251,018	1,113,922
2008	186,022	118,565											
Unit Value (yen/kg)	Month												Avg
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	¥4,333	¥5,037	¥4,185	¥4,345	¥4,462	¥3,813	¥4,369	¥4,746	¥4,529	¥4,499	¥4,520	¥4,974	¥4,583
2001	¥5,187	¥5,065	¥4,838	¥5,081	¥4,964			¥5,524	¥5,147	¥4,758	¥4,769	¥5,128	¥4,992
2002	¥5,247	¥5,422	¥4,824	¥4,555	¥6,130			¥5,781	¥4,761	¥4,777	¥4,522	¥4,943	¥4,929
2003	¥4,988	¥4,607	¥4,702	¥4,328	¥4,411	¥3,545		¥5,917	¥4,993	¥4,566	¥4,494	¥4,782	¥4,704
2004	¥4,980	¥4,555	¥4,521	¥4,511	¥4,442	¥3,933	¥4,861	¥5,793	¥4,968	¥4,825	¥4,712	¥4,843	¥4,745
2005	¥4,752	¥4,604	¥4,669	¥4,647	¥4,317			¥5,956	¥5,012	¥5,145	¥5,019	¥5,471	¥4,976
2006	¥5,099	¥5,115	¥5,077	¥4,986	¥5,439		¥5,016	¥6,325	¥3,881	¥5,281	¥5,288	¥5,675	¥5,223
2007	¥5,563	¥5,201	¥5,456	¥5,210	¥6,317			¥6,138	¥5,981	¥5,894	¥5,901	¥5,723	¥5,557
2008	¥5,536	¥4,822											

Similar records for US urchins (Table 5), primarily RSU from California but also including processed GSU from the East Coast, going into Japan are also available although in this case the apparent import decline is due more to the development of domestic markets in the US. The

Table 5: US imports of processed sea urchin products into Japan since 2000 (Japan Customs)

Quantity (kg)	Month												Totals
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	204,453	165,336	190,362	110,778	60,330	50,402	56,406	78,097	124,741	215,128	209,277	239,234	1,704,544
2001	171,050	148,477	143,517	86,484	43,997	45,872	47,525	59,229	74,775	173,367	176,765	235,726	1,406,784
2002	148,636	115,976	112,909	54,352	39,877	30,127	38,844	46,809	85,193	156,504	139,527	161,385	1,130,139
2003	112,165	96,589	95,256	53,141	27,738	17,414	19,127	35,242	72,288	131,101	127,497	124,553	912,111
2004	103,655	101,815	108,504	64,204	24,642	17,732	20,145	37,714	61,148	122,023	98,905	133,415	893,902
2005	68,937	68,005	61,038	30,819	28,201	11,923	14,737	25,438	48,709	100,254	108,258	126,844	693,163
2006	72,407	57,824	71,780	49,173	29,796	9,763	13,072	18,429	38,333	109,674	97,740	114,904	682,895
2007	61,366	44,492	65,997	33,177	31,377	7,460	6,760	15,376	47,636	94,863	90,241	89,936	588,681
2008	71,922	61,144											
Value (000 yen)	Month												Totals
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	1,240,812	967,183	1,012,508	597,092	313,585	263,614	259,335	418,012	698,721	1,325,601	1,136,820	1,557,164	9,790,447
2001	1,112,851	917,383	906,798	478,859	234,194	215,002	224,948	319,261	476,269	1,054,316	1,002,805	1,529,152	8,471,838
2002	927,896	636,102	591,627	331,571	226,730	164,876	194,241	276,107	519,253	920,355	769,880	1,056,955	6,617,593
2003	686,280	564,725	625,573	291,099	146,094	87,482	107,729	178,917	412,965	754,501	667,452	837,961	5,360,778
2004	589,720	510,818	533,496	297,997	128,928	82,283	87,138	167,645	315,034	669,177	521,746	839,579	4,743,561
2005	378,755	318,023	328,683	163,875	137,388	62,696	68,971	116,570	285,355	626,302	589,531	837,625	3,913,774
2006	432,235	313,302	365,966	257,467	140,821	43,433	53,537	79,611	197,404	600,164	582,367	698,688	3,764,995
2007	357,965	253,232	435,316	170,071	156,691	38,259	30,797	79,022	291,680	593,066	474,540	558,886	3,439,525
2008	438,115	392,751											
Unit Value (yen/kg)	Month												Avg
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2000	¥6,069	¥5,850	¥5,319	¥5,390	¥5,198	¥5,230	¥4,598	¥5,352	¥5,601	¥6,162	¥5,432	¥6,509	¥5,744
2001	¥6,506	¥6,179	¥6,318	¥5,537	¥5,323	¥4,687	¥4,733	¥5,390	¥6,369	¥6,081	¥5,673	¥6,487	¥6,022
2002	¥6,243	¥5,485	¥5,240	¥5,100	¥5,686	¥5,473	¥5,001	¥5,899	¥6,095	¥5,881	¥5,518	¥6,562	¥5,856
2003	¥6,118	¥5,847	¥5,567	¥5,478	¥5,267	¥5,024	¥5,632	¥5,077	¥5,713	¥5,755	¥5,235	¥6,728	¥5,877
2004	¥6,689	¥5,017	¥4,917	¥4,641	¥5,232	¥4,640	¥4,326	¥4,445	¥5,152	¥5,484	¥5,275	¥6,293	¥5,307
2005	¥5,494	¥4,676	¥5,385	¥5,317	¥4,872	¥5,258	¥4,680	¥4,583	¥5,858	¥6,247	¥5,446	¥6,604	¥5,646
2006	¥5,970	¥5,418	¥5,098	¥5,236	¥4,726	¥4,449	¥4,096	¥4,320	¥5,150	¥5,472	¥5,958	¥6,081	¥5,513
2007	¥5,833	¥5,692	¥6,596	¥5,126	¥4,994	¥5,129	¥4,556	¥5,139	¥6,123	¥6,252	¥5,259	¥6,214	¥5,843
2008	¥6,092	¥6,423											

volume shipped from the US slipped from 1,705 MT in 2000 to 586 MT in 2007. The unit prices obtained are a bit higher than those obtained by BC RSU but were generally comparable because of the differences in the currency value. The average prices commanded by California over the past few years have been a bit higher than those obtained by Canada although the prices they got for the 2007/08 season have thus far been even higher (Table 6). This may be a reflection of their commitment to supply product year-round as a means to support brand loyalty.

Table 6: Comparison of US and Canadian imports of processed sea urchin products into Japan.

Canadian vs US prices

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
2000	71.4%	86.1%	78.7%	80.6%	85.8%	72.9%	95.0%	88.7%	80.9%	73.0%	83.2%	76.4%	79.8%
2001	79.7%	82.0%	76.6%	91.8%	93.3%			102.5%	80.8%	78.2%	84.1%	79.0%	82.9%
2002	84.0%	98.9%	92.1%	74.7%	107.8%			98.0%	78.1%	81.2%	82.0%	75.3%	84.2%
2003	81.5%	78.8%	71.6%	79.0%	83.7%	70.6%		116.5%	87.4%	79.3%	85.8%	71.1%	80.0%
2004	87.5%	90.8%	91.9%	97.2%	84.9%	84.8%	112.4%	130.3%	96.2%	88.0%	89.3%	77.0%	89.4%
2005	86.5%	98.5%	86.7%	87.4%	88.6%			130.0%	85.5%	82.4%	92.2%	82.8%	86.1%
2006	85.4%	94.4%	99.6%	95.2%	115.1%		122.5%	146.4%	75.4%	96.5%	88.7%	93.3%	94.7%
2007	95.4%	91.4%	82.7%	101.6%	126.5%			119.4%	97.7%	94.3%	112.2%	92.1%	95.1%
2008	90.9%	75.1%											

Canadian vs US export volumes

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
2000	28.1%	25.4%	28.0%	39.5%	24.6%	1.8%	1.1%	3.0%	17.9%	25.5%	33.0%	42.0%	27.1%
2001	34.5%	29.0%	36.4%	29.9%	6.3%	0.0%	0.0%	1.2%	20.5%	29.7%	33.8%	43.1%	29.3%
2002	39.3%	38.9%	39.0%	24.9%	1.9%	0.0%	0.0%	0.8%	25.1%	36.7%	37.6%	62.0%	34.8%
2003	62.0%	39.6%	35.5%	45.1%	7.9%	0.9%	0.0%	0.2%	17.4%	27.8%	44.7%	75.2%	40.3%
2004	57.3%	49.3%	46.8%	36.8%	14.6%	0.3%	0.6%	2.7%	15.3%	28.3%	45.2%	71.7%	41.7%
2005	74.0%	60.5%	62.7%	109.2%	10.8%	0.0%	0.0%	4.0%	28.3%	28.1%	38.6%	69.2%	49.0%
2006	52.2%	69.2%	55.5%	57.1%	1.5%	0.0%	4.8%	6.4%	19.8%	15.2%	38.6%	52.1%	39.5%
2007	66.3%	51.6%	54.6%	73.6%	6.0%	0.0%	0.0%	12.5%	7.8%	8.8%	18.5%	48.8%	34.1%
2008	56.5%	37.6%											

4.2 BC Sea Urchin Fisheries

BC's sea urchin fisheries have been described as some of the most sustainable sea urchin fisheries in the world and the TAC from each has remained more or less stable over the past five years. Market conditions however have limited production and prices have been on a general decline over the past several years (Table 7) with a major decline seen in 2006, the latest season available through the DFO database. The listed result for 2006 appears to exaggerate the situation somewhat as the landings recorded by the official validation agency for either the 2005/2006 or the 2006/2007 season does not drop so precipitously (Table 8). These data are more accurate simply because they come more directly from each fishery without having passed through different reporting authorities but because they are based on a season which generally runs from July 1 to the end of June the following year, are also not directly comparable with the year on year records of DFO or provincial authorities.

Table 7: BC urchin production stats (DFO- online stats 2008)

Year	MT	000 \$C	\$C/kg
2000	5,049	\$8,879	\$1.76
2001	4,297	\$7,842	\$1.82
2002	4,362	\$7,581	\$1.74
2003	4,412	\$7,698	\$1.74
2004	4,520	\$7,633	\$1.69
2005	4,135	\$6,739	\$1.63
2006	1,887	\$3,093	\$1.64

Table 8: Validation data to March 15 2008 for BC's GSU and RSU fisheries (D&D Pacific Ltd.)

Season	GSU			RSU		
	TAC	Landed	%	TAC	Landed	%
1999/2000	188	186	98.9%	5,081	4,791	94.3%
2000/01	188	181	96.3%	4,432	4,368	98.6%
2001/02	179	123	68.7%	4,432	4,338	97.9%
2002/03	179	144	80.4%	4,432	4,283	96.6%
2003/04	186	168	90.3%	4,432	4,166	94.0%
2004/05	186	83	44.6%	4,432	3,953	89.2%
2005/06	186	37	19.9%	4,885	3,862	79.1%
2006/07	204	22	10.8%	4,824	2,531	52.5%
2007/08	211	68	32.2%	4,377	1,751	40.0%

At any rate, as can be seen in all of the data, landings have been declining fairly consistently even as the TAC's have been generally stable. Final results for this year are not yet available, but GSU harvest is estimated at 67.7 MT, up by a factor of three from last year and representing 32% of the TAC as opposed to the 10.8% taken last year. This is an improvement over last year but in the RSU fishery, the trend has not changed. Fishing is ongoing in this fishery but landings are projected to fall further this year in comparison to last year. The reasons for this deterioration lie in part with poor weather restricting harvest in many exposed areas, with the growing strength of the Canadian dollar over the past several years and an excess supply situation in Japan caused by a large Illegal, Unreported and Unregulated (IUU) Russian sea urchin fishery in the Kuriles. More detail will be provided in Section A3 of this document but in summary, this fishery has been landing volumes ranging from 8,000 - 13,000 MT per year of live product into Hokkaido since 2001. These are substantial volumes in relation to aggregate urchin market capacity in Japan and they serve to disrupt many sectors of that market.

4.2.1 Temperature Logging Initiative

Thermo-loggers were again sent out to track the handling temperatures for the product on a number of occasions this past year. Unfortunately there were again problems with participation as, often as not, the loggers were simply placed to one side and forgotten. It seems that the soft market is translating into a tightly ordered prioritization of operational efficiencies which directly affect costs and that interest from processors and buyers in information verifying the holding conditions is not considered critical. Establishing the procedures and building the value of the information within the fishery is going to require some demonstration of interest from buyers, something that has thus far been muted because of declining sales and harvest and the problems arising from that.

The results from this year, marked as Mission 2008-8 on Table 9, indicate that the accumulated heat exposure of the product increased somewhat from the most comparable set of data from last year, Mission 2007-2. The aggregate transport times involved are consistent with last year's results but the average, the average maximum and average minimum temperatures are all higher than last year. The effects of this on product quality have yet to be explored as no indication or measure of quality has yet been integrated into the analysis, although this remains the eventual intention. The power and value of this as a management tool will increase as the data is aggregated and augmented.

Table 9: Temperature logging missions from 2006/07 and 2007/08

Mission		Accum. heat (deg.C -hours)			Hours involved			Avg Temperature		Max. Temperature		Min. Temperature	
		on-water	landed	Total	on-water	landed	Total	on-water	landed	on-water	landed	on-water	landed
2006-1 n=10	Averages	19.14	42.78	61.91	8.70	37.35	46.05	2.25	1.18	3.65	3.00	1.10	-0.40
	Variation	13.24	36.49	45.19	2.91	7.55	8.92	1.38	0.95	1.06	0.75	1.78	1.20
	CV	1.45	1.17	1.37	2.99	4.95	5.16	1.63	1.25	3.46	4.02	0.62	-0.33
2007-1 n=10	Averages	125.20	103.63	228.83	23.30	37.13	60.42	5.28	2.73	6.40	4.60	4.30	1.75
	Variation	73.06	60.45	88.78	9.93	14.47	15.17	1.46	0.87	1.41	1.02	2.00	0.72
	CV	1.71	1.71	2.58	2.35	2.57	3.98	3.61	3.12	4.54	4.50	2.15	2.44
2007-2 n=12	Averages	101.38	109.75	211.13	21.04	31.02	52.06	4.44	3.41	5.29	5.29	3.88	2.08
	Variation	59.24	55.86	76.62	7.71	9.84	9.82	2.02	1.44	2.30	1.74	2.00	1.77
	CV	1.71	1.96	2.76	2.73	3.15	5.30	2.19	2.37	2.30	3.04	1.94	1.18
2008-1 n=8	Averages	193.38	129.84	323.22	29.00	26.69	55.69	6.36	4.83	7.25	7.06	5.25	3.19
	Variation	147.94	91.70	130.81	20.07	14.61	16.24	1.19	1.08	1.39	2.23	1.00	0.88
	CV	1.31	1.42	2.47	1.45	1.83	3.43	5.34	4.46	5.22	3.17	5.25	3.61

From this data it appears that the increase from on-water transport component is the major contributor but it should also be mentioned that there is uncertainty in the time attributions to each component in this data because the data sheets accompanying the loggers from the dive boat to the plant were often misplaced. The on-water and post-landing contributions were therefore estimated using apparent transitions in the temperatures whereas in prior data sets, the time of validation was used to discriminate the two components.

Getting the time at which the product is processed in the plant has also injected further uncertainty into the estimates. The temperature generally spikes to about 6 - 10°C once the product is offloaded from the refrigerated trailer but it then may take some hours to process that tote, especially if it is held overnight for the next day's shift.

4.3 California

Japanese markets remain soft for California uni but domestic demand, particularly in the summer, is steadily increasing. Approximately one-half of California's annual harvest of 10- 15 million pounds (5,000 - 7,500 tons) is now sold domestically. This market is strongest in the summer the industry, despite being committed to supplying fresh product to the market all year round because they consider this critical to building the brand identity with consumers and buyers, cannot get enough product because they are only fishing two days per week. The harvest

schedule for the fishery was designed years ago to accommodate Japanese demand peaks in the fall and winter months and changing this and getting authorization to increase harvest days in the summer season is turning out to be a bit of a bureaucratic hurdle. In some cases, US suppliers are importing product from Japan to keep a steady flow of product to their customers. Their problems may get worse in coming years as the fishery is also being threatened by a number of problems, including the effects of global warming on the Giant Kelp (*Macrocystis* spp.) production because it is sensitive to higher water temperatures. There is also, as in BC, a manpower issue because of an approaching shortfall of divers. Few young divers have entered the fishery in recent years and many of the active fishermen are rapidly approaching retirement (Ess 2007).

The California divers are also worried about the spread of Marine Protected Areas into the main urchin fishing grounds. These are mandated by the state Marine Life Protection Act and if the trend keeps up as it has in the recent past, sea urchin fishing could be devastated as the process moves south between Point Conception and Mexico later this year (CSUC 2008) and alienates many of the most productive areas. Scientists are monitoring the ecological and sociological effects of California's recently designated MPA's which will limit fishing in about 18% of State waters between Santa Barbara and San Mateo counties when regulations are implemented in the summer of 2008. The main goal of the project is to survey resident stocks in terms of densities, distribution, diversity and relative abundance etc. as well as to develop baseline socioeconomic data on the effects on commercial, recreational and non-consumptive users of the resource(es) (Johnson 2007).

The California industry is implementing a voluntary data collection program they are calling the Barefoot Ecologist Program to develop a more realistic and cost effective basis for sustainable management of the resource. The program developed with the assistance of Ray Hillborn from the University of Washington and basically requires each working diver to collect and measure the first 30 urchins they encounter on their dive, no matter what their size or quality. The idea here is that as the data accumulates it will more accurately reflect the actual numbers present throughout all the fishing areas than will more limited, and therefore less representative, data from formal government surveys (CSUC 2006 a).

The market for California sea urchin has shifted from an export to a domestic market over the last ten years and domestic demand in sushi bars is increasing by 10%-20% every year although some problems remain with finding suitable uses for lower grade and off grade material. The increased competition for product, both in terms of quality and price, means that the top 30%-60% of their uni is sold domestically while the rest is still mostly sold in Japan, often for very low prices (CSUC 2006 a).

There is a major difference of note between the two markets in that domestic buyers only order what they need, as opposed to whatever you want to ship, that has deterred some processors but the reality now is that it simply cannot be ignored. In the good old days they, like BC producers, would ship all they had on hand to Japan with some assurance that demand was almost unlimited, but now they must operate in a much more market sensitive fashion, an adjustment that some operators only reluctantly accept.

In the eyes of the California Sea Urchin Committee, the first requirement needed for a successful marketing program is a good product and with this in mind they are setting industry standards for temperature, diver handling, processor handling, grade standards and names (CSUC 2008). As part a strategy to reduce the negative connotations and stimulate demand for lower grade material, the California Sea Urchin Commission adopted new uni grade names and standards.

These are:

"California Gold" - bright gold, yellow or orange colour; firm buttery texture; fresh salty ocean scent; and with a sweet buttery taste. Uni sections are large and complete intact pieces. This is exceptionally high-grade uni for use in top quality sushi.

"Premium California" - gold, yellow or orange colour but less brilliant than California Gold; firm buttery texture; salty ocean scent; with a crisp and nutty taste. Uni sections are smaller but still primarily intact pieces. Premium uni is used for sushi, soups, salads, or combination dishes where uni is the featured item.

"Select California"-medium hues of yellow and orange or even tending to brown in color; salty ocean scent; softer creamy texture; with a more neutral nutty taste. Uni may be intact sections but can consist of broken pieces of the other grades. Frequently select is packaged and shipped frozen. Uses include soups, sauces and dishes where the uni is mixed with other ingredients, including other seafood (CSUC 2006).

A website and non-profit program called "The Faces of California Fishing" is promoting the California fishing industry to chefs, markets and consumers and is working to counter popular misconceptions that commercial fishing involves only large industrial interests. Most of the fleet is in fact composed of small, family owned enterprises and purchases of locally caught seafood supports local communities and infrastructure as the money spent circulates locally. The initiative has links to fish markets in the state, articles about and stories by fishermen, photographs and seafood tips and recipes (Chambers 2007).

4.4 Alaska

No information on this year's red urchin fishery in Alaska has been located. The resource in the South East (panhandle) remains largely untapped by commercial activity because of difficult logistics and high associated costs. Recovering sea otter populations are reportedly having dramatic effects on the abundance of many invertebrate species, including sea urchins.

4.5 IUU Fisheries

Leading maritime countries are increasingly confronting the challenges of IUU fishing (Lynch 2007). Coastal states are cooperating and firming regional fisheries management bodies to manage fishing beyond the 200 mile limits and oversee surveillance and policing of most high seas fisheries. Spain, Portugal and Russia have been identified as states not committed to

controlling IUU fishing and China has been described as an anomaly because of its demonstrated lack of control over its ruthlessly capitalistic private fishing companies (Lynch 2007).

IUU fishing can be very profitable with increasingly large shares of the benefits accruing to those further up the supply chain. The ultimate answer to the situation is controlling market access (Lynch 2007), although this is apparently still disputed by some markets benefiting from the activity. Increasing involvement in Regional Fishing Management Organizations (RFMOs) by countries and increasing collaboration to better control market access, including European, North and South American countries and Japan, is encouraging (Lynch 2007).

The fight against IUU fishing products is getting more intense. In May 2007, MSC certified fish was detained because the ship it was on, the Polestar, was recently caught loading IUU product in the North Atlantic and black-listed by the western European Maritime Authorities. This ship does not use containers and can therefore load up with fish on the high seas from vessels that have been fishing illegally. Containerized transporters are preferred because they require large dock-side cranes and chain of custody for traceability is much easier to confirm. More outlaws are engaging in high-seas transactions that got the Polestar in trouble as more governments crack down on IUU fishing in their waters but this case was one of the first that served notice to intermediary companies that they are sailing in dangerous waters (Anon 2007 q).

In-depth research on the IUU fishery in the Kuriles through the Japan Customs website has provided considerable data on Russian urchin landings into Hanasaki which are reported to be entirely IUU sourced. It also seems that IUU urchin landings in Hanasaki are pretty much year round as opposed to being largely restricted to the fall- winter season as had previously been reported. 913, 1,048 and 734 MT were landed in April, May and June 2007 respectively. The lowest landings in Hanasaki last year occurred in July and August when 173 and 143 MT averaging about 360 yen/kg., or \$C 1.70 / lb. This valuation is recorded on the customs forms and may be different from the actual landed price.

4.5.1 Control Issues and Initiatives

There are a number of initiatives being pursued by Canada, the US, Russia, Japan and others to get a better handle on IUU fishing problems. Russia in particular has decided it cannot continue losing hundreds of millions of dollars in tax revenues to illegal fishing every year and seems to be getting more serious about it. A Fisheries and Oceans Canada-sponsored case study on the Kurile IUU urchins is nearing completion and is intended to be part of a larger study into IUU fishing by Asia Pacific Economic Co-operation (APEC). It will be shared by all of the Organization's members, including Russia and Japan.

The main conclusion of this study concurs with the final declaration from a forum held in Vladivostok in October 2006 that stated the fight against IUU fishing should be conducted using all possible methods and include the flag states, the countries from which the catch is sourced, and the port states, those countries which allow the transfer, sale and/or purchase of poached product (Sokolova 2006). Resolving IUU fishing issues is in the interests of all countries and,

given the nature of the activities, effective solutions will require coordinated international action. Hopefully suitable actions will limit the IUU urchin fishery very soon, despite its apparent entrenchment over the past few years.

Japanese authorities generally hold that controlling IUU fishing is the responsibility of the flag state and that port states have little to contribute although, on April 1, 2002, they put in place a directive that vessels must present Customs Cargo declarations when landing product in Japan. Prior to that point there were no Japanese requirements that vessels possess or present documents authenticating the legality of the catch from Russia. The discussion of the issue by a Russian study (Glotov and Blinov 2006) is a bit confusing, but it seems that even since the imposition of the tougher import controls the process has been seen as simply a formality and the new requirement has not yet affected the levels of crab, and apparently live sea urchin, imported into Japan from Russia, although at least some crab shipments have since diverted to South Korea. There may be some implied discretionary authority residing with the Japanese customs office, but there is inadequate information available to verify this.

The main species being poached in the area are crab, including King, Blue, Snow, Hairy and others, Alaskan pollock, sea urchins. Sea cucumber and scallops (Glotov and Blinov 2006). Russian authorities have calculated that 60% of the crab shipped to Japan and the US in 2001 was IUU product, a figure that increased to more than 80% in 2004-05. Undeclared income from these shipments between 2000 - 2005 is estimated as not less than US\$ 1.25 B although this is based simply on the declared customs price, as opposed to the higher market value.

The crab harvested from Russia's Far East since the mid-1990's have been way in excess of the Total Allowable Catch limits declared by the government. The export levels to Japan and the US were: 1995- 54.9 KMT = 140% of the 38.7 KMT TAC, increased to 72- 76 KMT per year between 1996- 2001 even though the TAC did not change significantly (increased to 42.1 KMT). The TAC was reduced to 18.7 KMT in 2002 and continued decreasing so it was 7.1 KMT by 2005 even as shipments remained at about 45 KMT each year. The shipment records indicated that 48 KMT of crab were shipped in the first 6 months of 2005.

Market impacts from the excessive supplies of crab have been detected and documented by the Russian authorities and the impact of these operations on legitimate producers is acknowledged, although the impacts have thus far only been documented for other legitimate Russian producers. This impact on other international suppliers in the case of the IUU King and Blue crab is not directly dealt with by the study while in the case of IUU pollock and pollock roe they conclude that the prices obtained by the other main supplier looked at, Alaska, are not affected by excess Russian shipments.

It is also worth noting that the IUU operations are dependent upon the largesse of their buyers because they are solely focussed on maximizing production volumes of a product with a very limited shelf life and no alternative sales outlets. In this regard it may be better considered a spot market while legitimate sales from other suppliers may be subject to long-term contract conditions, including defined prices. This may be most clearly seen with the pollock market because the fishing volumes are an order of magnitude greater with the pollock fishing compared to the crab fishing.

4.5.2 Russian Fisheries Management

Russian Far East fisheries are basically individually managed using TAC's and use 44 bio-statistical areas (assumed equivalent to the PFMA system used in Canada) to summarize and analyse the resulting data. All fishing vessels are under Federal monitoring and equipped with satellite positioning sensors (Radchenko 2007).

A new Law on Fisheries Rules for the Far Eastern Basin was signed on March 1, 2007. This Law foresees specified requirements to regulate/control fishing ventures, vessels, documentation, gear restrictions, season and area restrictions etc but also an eventual, albeit gradual, withdrawal from a dependence on individual TAC's for each species so the management of all fisheries are integrated into a single ecologically-managed fishery (Radchenko 2007). This may or may not apply to "small coastal fishing vessels" as it also sounds like they will be excluded from the proposed fish limitations. The actual size of the vessels was not defined so the urchin fleet may or may not be included in this category.

Russian authorities calculate that less than 40% of their Far East urchin stocks are subject to harvest - although they do not apparently systematically survey them all. Estimates of the catch are less than the calculated TAC with logged catches only accounting for about 39 - 55% of the TAC over the past 3 years. This does not include IUU and they are aware of the increasing inaccuracies in the catch data. Brown algae have not been touched at all in the past few years and are quite dense (= lots of urchin feed). There are about 25 legal urchin harvesting ventures in the Far East and the number of such enterprises is not going to increase (Radchenko 2007 a).

Dr Galina Gavrilova, Russia's scientific authority for urchins in the Primorye District responded to questions regarding how the TAC's are calculated for urchins each year. Standardized urchin surveys are conducted each year to obtain index estimates of total and fishery biomass as well as gonadal indices for different habitats. The TAC is generally calculated as 10% of the fishery biomass.

They also have problems with pollock poaching and, as an example of what they are proposing to bring all boats under some semblance of control, it looks like they are simply increasing the 2006 TAC by a factor of about 5-6 times for the 2008 season. Only 73% of the TAC is utilized according to the logs. With crab at least they are proposing more advanced poaching control including vessel, catch and capital seizures. They are moving towards IQ fish management and consider the development of a secondary market for quotas and licences a priority (Radchenko 2007 a).

5.0 2007/08 SUFC CAFI Marketing Activities

The 2007 -2008 fishing season has been very difficult for the Sea Urchin products industry in BC and the generic activities of the Sea Urchins from Canada group were significantly curtailed this year. As a result the Sea Urchins from Canada Group de-committed the funds allocated to parts of the project that were not completed. Fairly extensive travel plans were approved and funded

for this past year. The access of the delegations to players in Japan steadily increased during the previous trips and expectations for building on the deepening personal relationships with Japanese buyers during previous trips to Japan to Japan were high. Unfortunately all travel plans, including the trips to the 2007 European Seafood Exhibition in Brussels, the 2007 International Seafood Show in China and the 2007/08 annual trip to Japan, were cancelled. The latter trip was initially scheduled for September 2007 and then again in November 2007 before subsequent discussions considered attending the 2008 Japan Seafood and Technology Expo in Osaka on January 23 - 24, 2008, but none of these plans worked out.

The market situation was very complicated for BC producers, especially as their competitive position has been seriously affected by the continuing appreciation of the Canadian dollar which has gained ~12% *vis a vis* the US dollar over the past year alone and some 25% over the past three years. Most producers remain dependent on the Japanese market and have developed few alternatives to move their product. Some producers are reported to be operating at a loss but are persisting simply because they lack alternatives and would otherwise be forced to close and sacrifice much of their staff most of which would undoubtedly move on. There seems to be a certain degree of desperation involved and some companies are reportedly undercutting the prices being realized by operations which are selling profitably in Japan and other markets and by doing so adding to the price pressures affecting all players. This is leading to increasing reluctance to share information among the participants and declining agreement between players on how to proceed.

In this regard it may be of interest that the 2007 Nobel prize in economics went to the developers of Mechanism Design which goes to the heart of how economic interactions should be arranged so when everyone behaves in a self interested manner, the result is something that everyone likes. The theory focusses on how to minimize the economic cost of asymmetric information and the problem(s) of dealing with a situation where one party has more information than the other. In many competitive situations, the incentives driving decisions of different parties are not compatible and some parties do better by not sharing all the requested information at their disposal or by lying. Defining areas where cooperation between companies and the rules by which cooperation on information sharing can proceed to mutual advantage is goal of the theory (Anon 2007 n). Additional targeted investigations into this area might provide background that would be helpful in defining ways forward and facilitate negotiations between players so the areas of cooperation and agreements governing sectoral working and marketing groups like the SUFC group are more formal.

5.1 Marketing Committee Meetings

5.1.1 November 2007

5.1.1.1 Attendance

Francis Cheung (Grand Hale)
Mike Crawford (Territory)

Albert Wong (Palladin)
Alice Tse (Seagate)

Lorne Swift (Keep It Cool)
Mike Featherstone (PUHA)
Geoff Krause (PUHA)

Tom Warner (Nautilus)
Bob Parker (Nautilus- Ocean Fish)
Peter Mercepp (Sung Fish)

5.1.1.2 Discussion

The first issue discussed involved the increasing value of the Canadian currency and the effects of this on margins because sales are prices in USD. Basically the upshot is that a price increase of about 10% in terms of USD is needed to compensate for the appreciation of the Canadian dollar. A target bulk price of ¥6,000 - 7,000 /kg. would allow Grand Hale the latitude to get their prices for their trays. They have been getting the same price from at least some of their customers for the past 3 years and have not seen any adjustment for the currency exchange. The season is just getting started and Japanese buyers have not yet established prices for this year. Japanese companies are tough negotiators though and solidarity by Canadian producers is needed to preserve a common front. Nautilus has had one load refused because of a “fabricated” quality complaint which was then used to try and lever a price concession. If that goal is (was) achieved, Japan can be expected to use this in turn to push for price breaks on other processors.

The price from Japan also sets the levels for lease and landed prices. There have been no serious discussions on landed price projections for the year. The most that was offered came from Grand Hale, which pays on recovery, when Francis observed that the landed price depends usable recovery. Nobody has been paid yet for fishing and the only number tossed about was a lo-ball at \$0.35/lb. No lease price is yet set but there was some speculation that lease costs may reach \$0.12 per lb on the South Coast (SC) (converting to a total of ~ \$3 - 4 k) and less, perhaps \$0.015 per lb (Σ to ~ \$1,800) on the North Coast (NC). It is sounding pretty much like lo-ball action this year. No licenses have been leased as yet and everybody is just using their own.

There was an projected breakeven price of ¥1,500 per tray (300 g) for NC product this year because of the cost structure and currency appreciation. Nautilus is packing and sending 60 - 80 gram trays to Japan

Lorne Swift provided a bit of an overview on what is happening with the trucking this year. Only 8 loads have thus far been shipped from Prince Rupert. There is about 48 k-lbs. due to arrive tomorrow (Nov. 15). They are not using the D and N trucking which moves the NC crab from Port Ed to the Lower mainland because their insurance requires they must own whatever they carry and they are not willing to take loads they do not own. There were some concerns expressed by processors and fishermen present regarding keeping truckers with a history in urchin transport involved. Some are not at this point but Lorne will give them a call and check their interest.

Trucking costs have been coming in at about \$0.10 / lb. based on filled trailers at a rate of \$3,900 per trip. Fuel surcharges have been dropped but the unloading rate has gone up by a bit. Lorne maintains he does not make any money on straight charter rate used for these trips, all of the money goes to the truckers. He makes money on the trips back up and on the odd one-way.

Lorne's trucks now make sure everyone is kept in the loop on the ETA and know they must be either on time or will notify Lorne if the truck is delayed for any reason. The driver is supposed to call Lorne, no matter what time it is, and then Lorne will update the processors.

Totes are good so far. There is full tracking with lading bills, documentation etc. and no non-US totes are showing up at Nautilus.

On the packing side, things are apparently going a little bit sideways. Dave Lansdowne has been working the Ryou on the sea cucumber fishery and was also covering off some sea urchin loads. One day last week he came in with only 19 k-lbs and he is now heading for home. This leaves Ken (Gale?) on the Western Commander as the only active packer up there right now. The Ocean Ranger and Theresa #1 are supposed to be heading that way shortly, although the Theresa has not actually checked in to inform anyone of their plans/expectations etc. The Commander is based in Prince Rupert and has generally filled in where needed but because Ken just bought the boat last year he is worried about maintaining revenues for the boat and reluctant to give ground on sharing the available trips.

Even with only three packers, costs are going to be inflated because only two are thus far needed. This works out to about 8 packer-weeks each month and the packer fleet could probably work out a deal between themselves so each of the 3 boats takes 10-12 days off per month so each gets 18 days of work per month or some such equivalent deal which would see each boat take a month and a bit off at some point during November, January, February and possibly March. This would lower the packer fleet costs and hopefully keep all packers out of the red for the year. The processors are hoping for at least a \$0.01/lb rate reduction but understand that this may not be possible and may be willing to accept the same costs as the last two years.

There was some discussion about production in Mexico picking up to the extent that they worked through April last year. Shipments from Russia have been picking up a bit again with reports of 150 - 200 tons a week coming in. Japan is in fact interested in BC product but not so much at the price. Takami, in particular, is very interested in Canadian product but while experience with them has seen them taking upwards of 30% of the catch, they have also kept pushing down prices to the extent that their largest Canadian supplier, Kiku, could not continue operating.

Meeting adjourned at 1420.

5.1.2 January 2008

5.1.2.1 Attendance

Francis Cheung (Grand Hale)
Spencer Cheung
Paddy Wong (Palladin)

Mike Featherstone (PUHA)
Geoff Krause (PUHA)

5.1.2.2 Background

The CAFI marketing program funding expires at the end of this fiscal (March 31, 2008) and another proposal and application are required by January 31, 2008 to further access the Long Term International Strategy (LTIS) Program we have been using for the last 4 years. The main purpose of this meeting is to get the needed background information (including commitments to fund the required industry share), ideas, budget guidelines and priority plans for the application. Moving ahead with this requires solid commitments from the main players, ie. the fishing associations PUHA and WCGUA, Paladin and Grand Hale, etc. so that whatever program is agreed upon is actually carried out. Options include a CAFI sponsored show for the 2008 Olympics in Beijing, the China National Seafood Show in November, a trip to Japan to meet buyers etc, more strategic planning etc (incl. these meetings), further web enhancements, etc.

CAFI also requires a 2007/08 funding de-commitment letter ASAP. This is the second year in a row where the approved monies have not been spent and each instance makes it more difficult to access further funding from the federal government. This is only compounded if the proper notifications are not given.

Approved funding for this year was about \$46 K but we spent only about \$8,400 on the program to the end of December. About \$2,500 has been retained to translate the brochure into Japanese, Mandarin and Cantonese and get some copies printed up along with \$3,600 to cover the website maintenance and development this past year. A further \$ 5 K covering the retainer to Geoff plus another \$3- 5 K for the final report are the only other expenses scheduled to the end of fiscal. A trip this year is not likely, although there is a seafood show in Osaka in February sometime that might still be eligible for this year's funding assuming it makes sense to pursue it. At any rate, we currently have marketing expenditures totalling about \$22.4 K for the year allowing funding recovery from CAFI of \$11.2 K. This would imply a de-commitment letter totalling \$35 K is called for. This is somewhat worse than the \$11,500 left on the table last year.

Time is short but it can still be done if decisions come out today. It may make more sense to go for project (as opposed to Program) funding this year. This sort of funding is generally for lessor amounts but would fund (with 50% dollars) say- a trip to China/Japan in November (China's national seafood show is in Shindao in 2008) as a stand alone item. It would not include any retainers but reporting etc would still be required and covered. Deadlines for these sorts of applications will probably not occur until May- June with a further 2 months required for approval. There might be other deadlines allowed in August, October and November but there is no commitment from Agriculture and AgriFood Canada (AAFC) on those yet.

5.1.2.3 Discussion

There was general agreement that an application to continue the LTIS CAFI Program funding should be developed and submitted. A summer show in Beijing can be expected to be very expensive, simply because of the 2008 Summer Olympics is boosting hotel and restaurant rates etc. As a bit of a post-script, informal assessments from CAFI on the draft LTIS submission

were not favourable because the substantial de-commitments by SUFC over the past couple of years have made it very difficult to convince funding authorities that the group is committed to the plan. Advice strongly indicated that an application for short term project funding to revitalize the International Strategy would stand a much better chance of approval. This project must not look like we're simply trying to make up for missing the LTIS deadline but should be able to include coordinated missions to China and Japan as we re-boot the strategy. Discussions with Mike resulted in abandonment of the LTIS process with the idea that another application will be developed and submitted to CAFI for shorter term project funding in early April 2008.

There was also some talk about trying to get some representation at the 2008 Boston Seafood Show in mid-March, which might be eligible for this year's budget as a replacement for the missed show in Brussels in May 2007, but the market opportunities and business rationale for attending are limited and unlikely to generate a lot of enthusiasm.

Somewhat more reasonable perhaps might be funding assistance for an upcoming trip by GHMP to Hong Kong as a prelude to getting some Canadian product promotion at the Hong Kong Seafood show this coming summer. Geoff will submit a request to CAFI to substitute in this trip as part of the travel budget for the 2007/08 fiscal budget.

5.1.2.4 Market

The issue of Seagate undercutting Grand Hale Marine Products (GHMP) sales to developing customers in Hong Kong. The Hong Kong market has lots of potential if companies could only figure out how to cooperate on the price instead of coming across as so desperate they willingly move product at a loss. Product from Chile commands twice the price of Canadian product even though it looks horrible. The Seafood show in Hong Kong occurs in the summer when temperatures are in the mid to high 30's (centigrade) with 100% + humidity and having a good cooler is imperative to hold the product in good shape for any time. Standard coolers only hold the temperature at 12 - 15° C which is too warm to preserve the product in ideal condition. A temperature range lying between 2 - -2°C would be much better.

A company by the name of Sun Shun, or something like that, buys product from Seagate in Japan and ships it over to Hong Kong cheaper than the direct sales of Canadian product into Hong Kong. Seagate's moves in this regard have basically killed GHMP's opportunities in Hong Kong. It is particularly unfair because Seagate is apparently operating at a loss these days. The same sort of condition appears to be the case with sales by Seagate and Sung to Takami. The price is again being held very low because Seagate and Sung are vulnerable in part because they are maintaining production levels too high and they have a certain volume they have to sell. Supply is therefore in excess of demand and both companies are rumoured to be working at a loss until they manage to get recoveries up to about 12%. Seagate in particular appears to be selling blind and depending on buyers to provide market intelligence.

Mike Crawford is currently in Japan trying to get Grade A trays direct onto supermarket shelves. Progress in this regard remains uncertain, perhaps Mike will have some encouraging news on his return.

Paladin is still working with Maruki but is unsure of whether Maruki is going to once again be promoting Canadian product at the Tokyo Seafood Show in July. He will make some enquires.

There were a number of concerns voiced about Nautilus as well. It seems they are not keeping upon their payments to packers, fishermen and truckers.

5.1.2.5 PUHA Membership Issues

There was also some discussion about a PUHA member, Jim Hereford, who is unhappy with the payment and funding arrangements for licence holders. He does not accept that validation is worth the cost and feels that the D&D, research and other associated costs are simply an unnecessary burden on the fishermen. Unfortunately for him, DFO likes and has mandated the system. If he decides to bail out on the collective arrangements he will have to make his own individual arrangements with a designated service provider for validation and catch monitoring and good luck on getting any sort of better deal that way.

5.1.2.6 Fishing

At this point the market will not support more than a single truck per day and a further drop is anticipated after Chinese New Year (February 7 this year). GHMP has limited its 4 active boats to 3,000 lbs/day, Paladin currently has 5 boats active, each limited to 4,000 lbs., and has been sending boats home, HiTo has one boat and Territory two. Total production from the North Coast right now is therefore about 40,000 lbs.

There was some discussion on this year's fishing in the Queen Charlottes. All understand industry must dedicate some effort to the area to maintain access. However, these days the operations will only break even at recoveries exceeding 8% suggesting the fishing should be limited to high grading the cream.

There was a bit more discussion on water loss. Product from Campbell River is coming in with a very low recovery of about 6% suggesting there is still lots of room to improve the fishing strategy to better optimize the quality from each area. Getting some records of salinity profiles in fishing areas might prove very enlightening in this regard as a quick shot of fresh(er) water might just be enough to boost the urchin into a more reproductive mode, softening the texture of the uni and pushing down the recovery. Water loss has been an on-going subject for a few years now but previous analyses which have thus far not been able to quantify the contribution of time, temperature, area, etc. to the satisfaction of the processors. The problem from their perspective seems to be that the plant weight is usually 10 - 20% lower than the dock weight. The urchins drain to some degree on the packer depending on their orientation. Once they are transferred to the transport totes they are however all randomly re-oriented meaning that the drainage process is basically reset back to zero and a different set of urchins will be draining in the truck. Holding the urchins longer on the packer will not systematically change the drainage rates on the truck so it is unlikely the processors will ever consistently eliminate the discrepancy between the dock and plant weight. Holding them longer on the packer though will result in further quality

deterioration time which will reduce their realized recoveries which hardly seems like it should be a sensible objective.

There was some comment that BC green urchins are especially hard to dry out in comparison to East Coast or Japanese green urchins and that this is the reason processing of BC greens is not pursued domestically. In this regard it may be interesting to consider the possible effects of delaying processing during transport. Urchins caught in the Canadian Maritimes are shipped to the US for processing. This delay may be key to easing the processing requirements. As a bit of an aside, Newfoundland Green urchins are generally very lousy, small and black were the operative descriptors.

5.2 Japanese Media Mission to British Columbia

A Japanese journalist mission consisting of five journalists from Japan's representative news services agency "Kyodo News", prominent food publications "Ryori Ohkoku (Cuisine Kingdom)" and "Senmon Ryori (Professional Cooking)" and a Trade Commissioner from the Embassy of Canada in Tokyo visited Western Canada from September 8-16, 2007. This section of the report has been copied from an email produced by Mr, Tsuneto Sasaki, a Trade Commissioner working for the Candian Embassy in Tokyo.

This visit was the second part of a two year project after a successful journalist mission to Eastern Canada in June 2006. The first journalist mission to the east coast consisted of trade newspapers and a culinary magazine and the second focussed on mainstream media and food publications. The mission undertook an extensive tour of the west coast seafood industry and met with industry, provincial and federal partners. The Embassy Commercial Section cooperated with the Public Affairs Section and recruited the media representatives, and Agriculture and AgriFood Canada's (AAFC) seafood team and the BC Ministry of Environment arranged a very comprehensive one week tour. In return, each journalist wrote a Canadian seafood article.

The overall goal of this project was to increase the immediate awareness of Japanese consumers as well as seafood product buyers and seafood processors in Japan. Seafood associations supported by the Canadian Agriculture and Food International (CAFI) program have been very active in promoting their specific seafood products in Japan. This project complements their existing activities and tying them together through promoting the Canada brand. The articles emphasize Canada's variety, quality, reliability and sustainability. Paid advertising of this magnitude is extremely expensive in Japan and not feasible. As such, this project offers significant value for the allocated budget from AAFC the British Columbia Government.

The locations, plants and companies in this second journalist mission program included:

- Creative Salmon Farm Site and Processing Plant - Tofino
- Trilogy Fish Company (Retailing, Wholesaling and Processing) - Tofino
- Fanny Bay Oysters - Fanny Bay
- Canadian Aquaculture Industry Alliance - Fanny Bay

Grand Hale Marine Products - Richmond
Pacific Urchin Harvesters Association (observation of urchin harvest) - Bowen Island
Totem Sea Farm - Egmont
BC Seafood Alliance - Vancouver
Canadian Pacific Kazunoko Association - Vancouver
BC Ministry of Environment
Fisheries and Ocean Canada
BC Salmon Marketing Council - Vancouver
Kayama Enterprises - Richmond
Tomiyama Sushi Processing Plant - Richmond
Shijo - Vancouver
Finest At Sea Oceans Products - Vancouver
Finest At Sea Oceans Products - Victoria
Sooke Harbour House - Sooke
Inspection of seafood retail shops - Vancouver

The two magazine articles were translated into English (Appendices B and C) by an outside service provider and the Kyodo news report described below (Appendix D) have been translated into English by the Embassy Translation Services. The actual magazine articles are attached as PDF's for reference (Appendices E and F). Hard copies of the magazines and newspaper coverage from Kyodo will be sent to AAFC in Ottawa to the attention to Ms. JoAnne Roy-Foster.

5.2.1 Media Exposure

5.2.1.1 Kyodo News

Kyodo News released a Kyodo report on the BC seafood industry for major Japanese local newspapers on January 1, 2008 as a New Year special. The newspaper featured a half-page report by Mr. Hayato Ishii, Editorial Writer of Kyodo, including large pictures of Canadian salmon fisherman holding a king salmon caught near the U.S. Alaska border. Pictures also displayed Canadian "Herring Roe" for the Japan's new year at Tsukiji Fish Market and a chart and map of world fishing and fish farming trends, including Canada and Vancouver.

Mr. Ishii's report was published by The Ehime Shimbun and a similar report was published by the Okinawa Times and/or Ryukyu Shimpo. The report is expected to appear in other newspapers as well. Final coverage will be advised by Kyodo by the end of January. The English translation of Kyodo report is attached.

5.2.1.2 Senmon Ryori (Professional Cooking)

A four-page colour seafood article entitled "Canadian Fishery Products" - "Accumulating knowledge of fishery resources and varieties from the west coast" was published in this monthly magazine in the December 2007 issue.

A Senmon Ryori journalist gave an overview of the BC seafood industry, trends of production and trade, government fishery resources management policy, environment protection policy, food safety and quality assurance program. The report also included federal and provincial government activities supporting the BC seafood industry and an introduction of the Canada Pacific Kazunoko (herring roe) Association's activity in Japan. The article also reported on the BC salmon industry, sablefish farming, sea urchin, fish processing, wholesaling and exporting, and an introduction of Sooke Harbour House which uses BC locally grown seafood and organic vegetables and herbs for its restaurant.

Noting that unpaid editorial is more valuable than paid, the approximate value of the article based on the advertising rates in the magazine: JPY1,760,000 = C\$16,000

5.2.1.3 Ryori Ohkoku (Cuisine Kingdom)

A five-page colour seafood article entitled "Canadian Ecological Fish & Seafood Industry = Matching with Nature" was publicized in the January 2008 issue of this monthly magazine.

The Cuisine Kingdom journalist covered the nature of Canada, nature of BC and "Safe", "Reliable", "Sustainable Resources Management". The article covered sablefish farming, the introduction of family cuisines, sea urchin harvesting, wild salmon and environment friendly salmon farming and management, introduction of sushi using varieties of BC seafood for restaurants and retail shops. It also introduced "Seafood Heaven" in BC focusing on varieties of seafood for fish and chips, crab cakes, and fresh oysters, dungeness crabs and other products.

It is notable that the page with the BC sushi report and pictures is set beside "Sukiyabashi Jiro" sushi restaurant which has recently been nominated as one of Three Star Restaurants by Michelin Tokyo.

Approximate paid advertising value of the article: JPY 4,200,000 = C\$38,000

5.2.2 Media Information

5.2.2.1 Senmon Ryori

Senmon Ryori is a quality magazine focusing on the cooking technique and food culture for professional staff involved in restaurant business. They are specialized in gathering information what professional cook or chefs require for success of their business including food trend and food materials.

Date of publication.....every 19th of the month (monthly magazine)

Circulation.....91,000 copies

Price.....1,470 yen (including tax)

Sales methods.....available at major bookstores all over Japan

Proportion of subscribers by region:

Hokkaido - 4.1%
Tohoku - 6.4%
Kanto - 35.0%
Shinetsu/Hokuriku/Tokai - 14.8%
Kansai - 19.5%
Chugoku - 4.7%
Shikoku - 2.8%
Kyushu - 11.5%
Overseas - 1.2%

Proportion of subscriber by type of food business:

Western style restaurant (28.8%)
Japanese restaurant (18.9%)
Hotel and Japanese Inn (19%)
Chinese restaurant (11.5%)
Specialized restaurant (9.3%)
Food Catering (8.3%)
Bistro, Pub, Cafe (3%)
Delicatessen (1.5%)
Others (3.5%)

Breakdown of subscriber by position of food business:

Owners of food services, restaurant etc. (33.8%)
Cook and cooking staffs (26%)
Chefs (22%)
Employees (6.3%)
Managers (4.8%)
Directors (4.7%)
Others (2.4%)
Advertising Rate: 440,000 JPY for a colour page

Expected exposure: 4-5 colour editorial pages on B.C. fish and seafood (440,000 x 4 or 5 = 1,760,000 or 2,200,000 JPY)

Note: Editorial page may be more value than the actual advertisement

5.2.2.2 Ryori Ohkoku

Ryori Ohkoku is a quality magazine focusing on the pleasure and culture of eating. Their main concepts are "What are we going to eat? Where are we going to eat? What are we going to cook?"

Leaders of "Ryori Ohkoku" are searching for the highest quality information. "Ryori Ohkoku" has built up a widespread network of gourmet information among chefs, food producers and discerning gourmards from around the world, enabling them to offer top-quality information

from leading writers.

Address: Shiba Boat Building 10F, 3-1-15 Shiba, Minato-ku, Tokyo 105-0014 Japan

Tel: +81-3-3453-4343 Fax: +81-3-3453-4344

Date of publication.....Every 6th of the month (monthly magazine)

Circulation.....100,000 copies

Price.....970 yen (including tax)

Sales methods.....available at major bookstores all over Japan, and also by subscription

Proportion of subscribers by region:

Hokkaido - 3%

Tohoku - 5%

Kanto - 47%

Shinetsu/Hokuriku/ Tokai - 16%

Kansai - 9%

Chugoku - 3%

Shikoku - 2%

Kyushu - 5%

Proportion of subscriber by age:

Female 30s (23%)

Female 40s (20%)

Male 30s (19%)

Female 20s (15%)

Male 20s (10%)

Male 40s (6%)

Others (7%)

Breakdown by gender: Female 60% / Male 40%

Advertising Rate: 840,000 JPY for a colour page (advertising rate)

Expected exposure: 3-4 colour pages articles on B.C. fish and seafood (840,000 x 3 or 4 = 2,520,000 or 3,360,000 JPY)

Note: Editorial page may be more value than the actual advertisement

5.2.2.3 Kyodo News Service

Kyodo News Service, Japan's representative news agency (established in 1914), is a non-profit cooperative news agency which is independent of government, political and commercial interests. Kyodo is very similar to the Canadian Press. Kyodo maintains some business ties with CP mainly through AP.

Kyodo is operated with an annual budget made up of membership fees and subscription revenues of their articles. It is committed to comprehensive news coverage (from political to sport news) of both the domestic and international scenes for newspapers, broadcasters and other subscribers. Nearly 100 newspapers and 150 radio and television companies subscribe Kyodo news. The combined circulation of newspaper subscribers is about 50 million.

Kyodo has 54 domestic news bureaus and 39 overseas bureaus with 72 correspondents. However it never opened a bureau in Canada.

Kyodo also distributes English language news to world media organizations.

More details can be found at : <http://home.kyodo.co.jp/modules/fstStatic/index.php?pageid=2&>

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