

# **2007 Sea Urchin Summit Workshop Proceedings**

Marriott Pinnacle Downtown  
March 6, 2007

---



**Hosted By: The BC Seafood Alliance  
Pacific Urchin Harvesters Association  
and the  
West Coast Green Urchin Association**

**Funded and supported by the Canada Agriculture and Food  
International (CAFI) Program  
Agriculture and Agri-Food Canada**

# 2007 Sea Urchin Summit

## Workshop Proceedings

Marriott Pinnacle Downtown

March 6, 2007

---

### Welcome & Introductions

Welcome to 2007 Sea Urchin Summit. There are 45 attendees representing fishermen, harvester groups, processors, buyers, science, management, international directorate, AAFC, Province and fishing groups from California and Alaska. All the players are here for a day of productive dialogue and to gain a common understanding the present situation with a view to effecting positive change.

Today's Focus is a Sea Urchin Benchmark Study, commissioned by the BC Seafood Alliance to foster improved understanding of the red sea urchin fishery. The report was prepared by Explorations Unlimited and funded by Agriculture and Agri-Food Canada as part of the Seafood Value Chain Roundtable initiative. The purposes of the study are aimed at: securing an enduring competitive advantage for Canada in international markets and gaining a better understanding of the red sea urchin fishery on the Pacific coast of Canada. Red sea urchins an interesting case study.

The purpose of the summit is to bring everyone together to gain a better understanding of the current situation (the "problems") by considering the challenges and opportunities in Benchmark Report and jointly develop strategies for improving the competitiveness of the BC sea urchin industry.

### The "Case" of Red Sea Urchins

Uni is a valuable delicacy sold in Japan and the Red Sea Urchin fishery is a successful small scale fishery in BC. It is well managed, environmentally sustainable and generating wealth for participants and coastal communities. The industry is suffering from global trade competition from a Russian IUU fishery.

### History of the Fishery

(Mike Featherstone)

There are 3 Pillars of the Pacific Urchin Harvesters Association (PUHA). These are:

Sustainability

Maximizing Economic Value of the Catch

Increasing community awareness and knowledge of the industry.

In the "Early (pre-quota)days", the fishery grew slowly until the early 80's and then expanded rapidly until 1992 when fishery landed just under 29 million pounds. Limited entry was implemented in 1991, based on landings (75,000 lbs) and a minimum participation threshold comprising either 20 days of harvest or 5,000 pounds landed on the North Coast during 1987 - 1989. Native harvesters qualified under less restrictive guidelines such as any investment in equipment or vessel. In 1990 there were 188 licences issued this was eventually reduced to 110 after limitation and appeals. Licence transferability was not permitted.

Through the late 80's and into the early 90's, management became more intensive particularly in the south coast where catch quotas had been established. In spite of the managers efforts this period was characterized by catch overages. Limited entry didn't control harvests and landings doubled from 1990 to 1991 and almost doubled again in the 1991-1992 season. In many respects the relationship between managers and fishermen was adversarial, fishermen were unco-operative, information was not readily shared and there was a general mistrust. It should be said that fishermen also treated each other the same way at this time.

The Pacific Urchin Harvesters Association (PUHA) was incorporated in 1992. In 1993 managers instituted a coast wide Total Allowable Catch and area selection which intensified fishing activities into the classic "shot-gun" style openings resulting in poor safety practices, poor compliance to harvest regime and supply gluts (poor prices). 10 million pounds were harvested by May before fishing was suspended so 2 million pounds could be reserved for the fall. Until 1994 licence fees were \$50 and PUHA fee was \$25

In January 1994, the fishing season opened in similar fashion to 1993 and 1 million pounds were landed in a matter of days. The plan for the 1994 season was to take 1 million pounds per month. However, when fishermen returned to Prince Rupert for the February opening they realized this plan wasn't going to achieve the goals PUHA had set for itself.

With this realization, the Fishermen voluntarily tied up their vessels and over the next 3 days the fishermen hammered out a voluntary Individual Quota (IQ) System in a local hotel which offered free meeting rooms. The system was based largely on the IQ system adopted by the Geoduck fishery in 1989. There was a number of geoduck licence holders involved in the urchin fishery at the time and as well some of the urchin divers had moved to sea urchins when the geoduck system was rationalized. Thus the fishermen recognized the benefits of the IQ system and were familiar with its requirements.

The implementation of the IQ system involved use of a validation log and off-load validators at designated landing ports to record the landings. The log was only available from D&D Pacific which was an independent 3rd party company which had been involved with the industry monitoring roe content at the plants. The Total Allowable Catch (TAC) was divided equally amongst the licence holders in each area (south and north) and leasing was permitted between licence holders. The system was financed by a \$.02/lb landing tax deducted from the fish slip settlements and paid by the urchin processors on behalf of the fishermen.

In 1994, PUHA in co-operation with DFO and community groups (Haida and Kitsoo Fisheries programs) set aside 5 large representative areas for more intensive scientific studies on sea urchin biology. The Province of British Columbia provided funding of many \$100's of thousands of dollars for the first 5 years of program and these areas still form a key part of the science program today.

Since the implementation of the IQ system there have been no significant quota overages, prices and supply to the market have increased and stabilized, the fishery's safety record has greatly improved and fishermen have increasingly taken more responsibility in the daily management of the fishery.

In 1996 DFO officially sanctioned the Individual Quota system and licence transferability was permitted. In addition to the off-load validation program DFO required an On-grounds Monitor and 2% of the TAC was allocated for Native Food, Social and Ceremonial Use. At that point there were 23 south coast fishing areas and 33 north coast fishing areas.

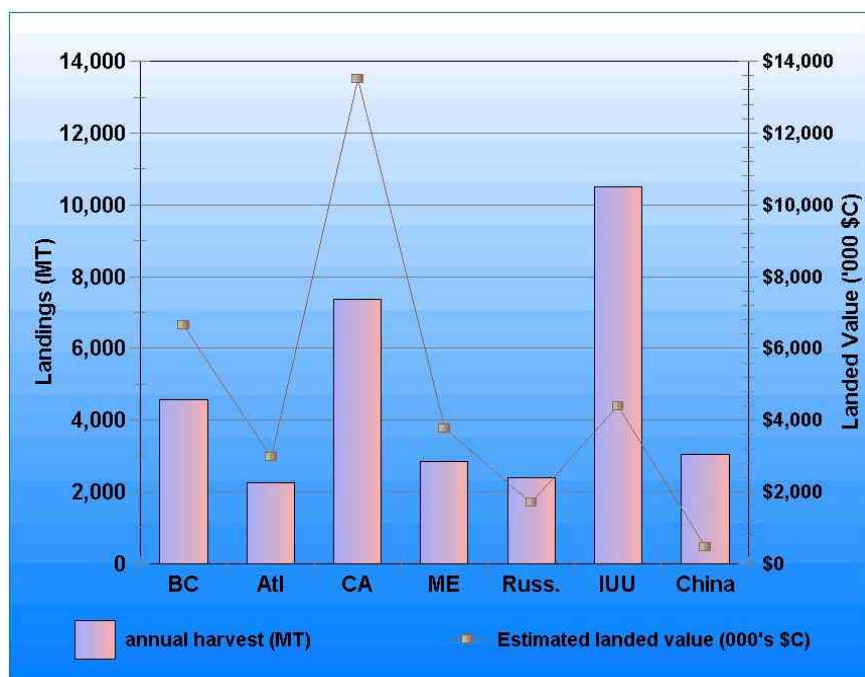
PUHA administered programs cost \$5,000/licence at this point. The costs increased to \$5,321.36 in 2000 and \$5,500 in 2002. Prices increased steadily until 2002 and stabilized and all licences were validated with PUHA until 2004. Since then the fishery has evolved so there are now 34 south coast fishing areas and 71 north coast fishing areas. On a less cheery note, prices started declining by 2004 and market demand became stagnant and then decreased. This year, PUHA has forecast only 80 licences will validate, leaving a budget shortfall of \$165,000.

## Summary of Benchmark Study Findings

Geoff Krause from Explorations Unlimited Inc.

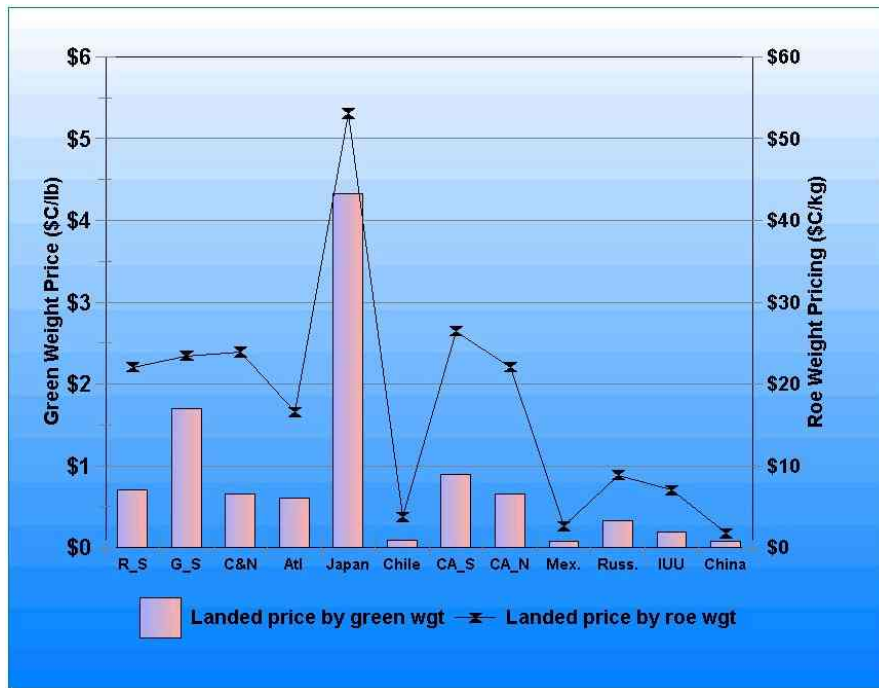
Geoff Krause is a consulting biologist and has been working with BC's urchin associations for some years on a variety of projects. Last year he completed a study commissioned by the BC Seafood Alliance comparing BC's urchin fisheries to other major producers around the world.

He provided a quick overview of the general findings of the study in his presentation, but with an emphasis on an Illegal, Unregulated and Unreported Russian sea urchin fishery in the Kurile Islands which is disrupting the whole Japanese urchin products market. With annual consumption of about 6,000 MT of uni, Japan remains the main market for these products even as Japanese cuisine is the fastest growing food service category in many other parts of the world.



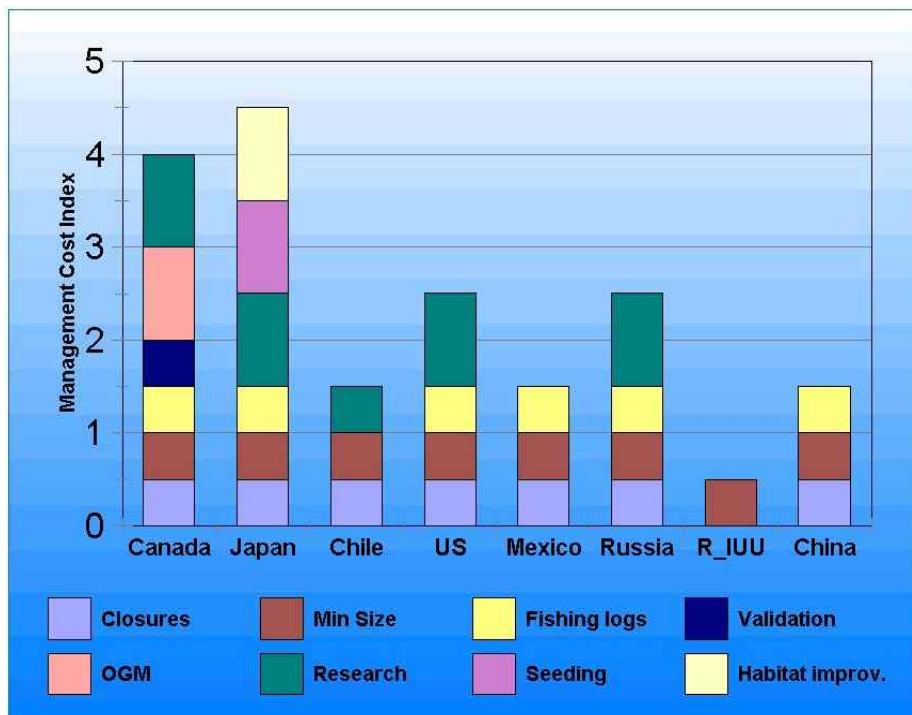
**Figure 1:** Landings and value from various urchin fisheries

Canada in aggregate has the 4th largest legal urchin fishing industry in the world trailing Chile, Japan and the US (Figure 1). Japan and California are the primary markers used for comparison in this study. The Russian IUU fishery would kick that country up to #3 if it were included. It is interesting to note that while Chilean fishery is, with landings of about 50 KMT worth about USD 9.5 M, by far and away the largest in terms of volume. Japan's landings of 13,000 MT have a landed value of about USD127 M.



The landed prices obtained by each of these producers is generally categorised into 3 tiers: Japan at the highest level, the US and Canada in the middle and less developed countries including Chile, Russia and perhaps (probably?) Mexico at a lower level (Figure 2). It is especially hard to beat Japan on the quality side because they may be more accurately characterized as cultivating their product, as opposed to simply harvesting it.

Figure 2: Landed prices paid in various urchin fisheries



The BC fishery is sustainable, our management regime is effective but it is more costly to industry in comparison to other producers because intensive regulatory measures, including on-grounds monitoring and comprehensive validation, and research are fully funded by industry (Figure 3). These activities are either not required to the same degree or are partially funded by government in other countries.

Figure 3: Management cost indices for various urchin fisheries

Harvesting and transport operations are efficient in good part because relatively high daily harvest levels allow certain economies of scale with harvesting, packing and transport. This system works quite well as long as everybody coordinates and capacities are optimized.

The distances from the main fishing grounds allow the accumulation of more handling impacts and higher costs in comparison to Japan and California, again considered the two premiere

producers for the purposes of this study. The post-harvest transit times to the plants in their fisheries are measured in hours while product off BC’s North Coast can take days. This requires extra care to get the same results.

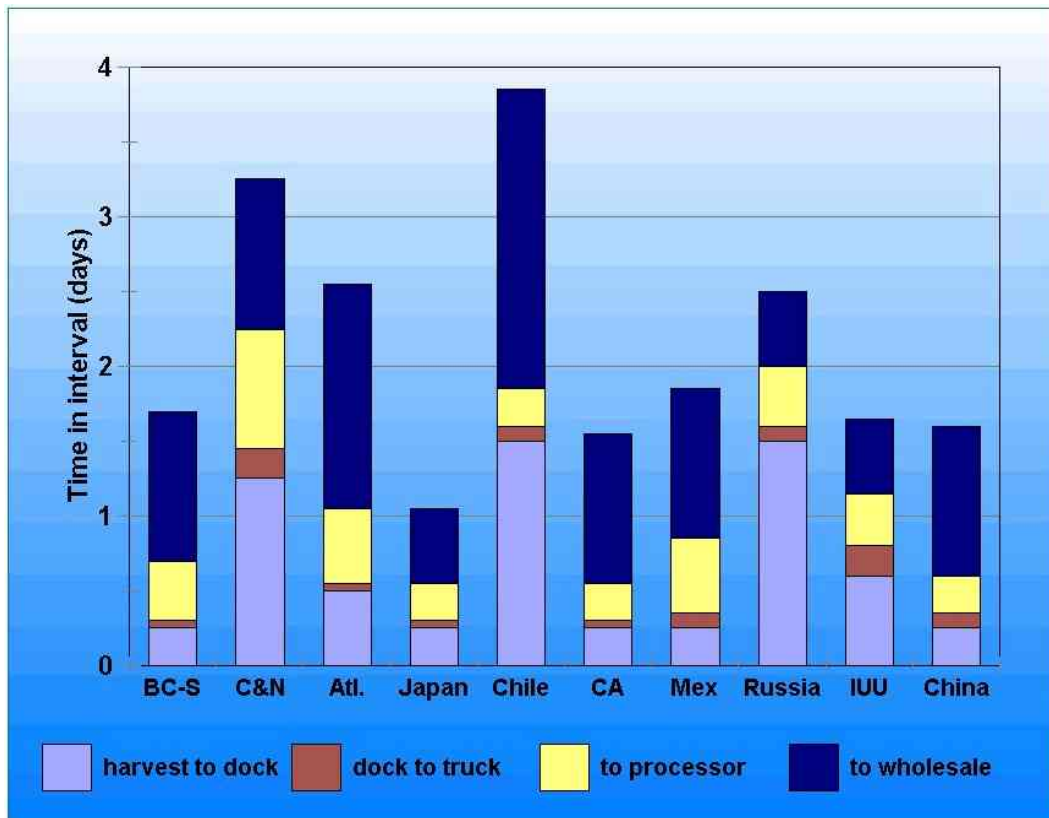


Figure 4: Intervals between transport stages from harvest to wholesale market

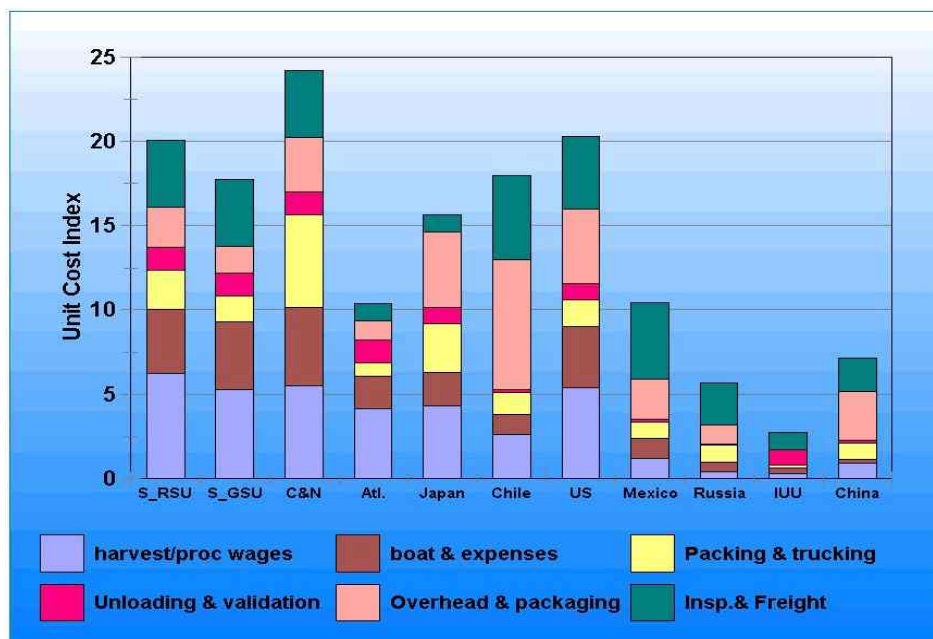


Figure 5: Indexed unit costs for various urchin fisheries.

The greater distances also mean we face higher unit costs, especially on the North Coast (Figure 5). Developing countries have advantages in some respects because the pay rates are lower and the workforce not generally as well educated so more frequent lapses can compromise their ability to focus on quality, consistency and sustainability.

In summary he concluded that BC's RSU fishery is doing pretty well operationally and our product is quite good, as evidenced by, for example, roughly equivalent prices for contract sales from California and BC product in Japan. (Figure 6)

Benchmarks	Ratings			Comments
	BC	CA	Japan	
<b>Government Policies</b>				
Resource Sustainability	4	2	3	Canada's urchin fisheries seen as very good in this regard
Resource Management	3	3	4	Electronic Vessel Monitoring technology for additional flexibility
<b>Operations</b>				
Management	2	2	3	Some transparency and coordination concerns
Input Costs	2	2	2	High load factors result in efficient use of capital and labour
Harvesting	3	3	2	Efficient; remote/extensive area raises equip. & flexibility issues
Post-harvest handling	2	3	4	Good awareness of issues and causes, reasonable results
Handling impacts R&D	2	2	2	Lack of empirical data on quality impacts, now based on opinions
Processing	2	3	3	No GSU proc'g or North Coast facilities; room for add'l value added
Logistics/transportation	2	3	3	Remote harvests cause complexities; good fleet support
Quality	2	3	4	Realized recoveries competitive, refrigeration might raise N. Coast bar
Continuity of supply	2	3	3	Weather related delays on north Coast; no summer supply
<b>Marketing</b>				
Market research	3	2	3	Good and increasing sectoral collaboration on market'g
Product development	2	2	2	Standard definitions (Japan); add'l info services in dev't to differentiate
Pricing	2	2	2	Russia, China & Chile are low cost; Russian IUU = market disruptor
Promotion/advertising	2	2	2	Increasing collaboration with Japanese distributors
Market development	2	2	2	Japan represents ~75-80% of world market
Selling methods	2	2	2	Company-based everywhere
Customer service	2	3	4	Direct consumer contact limited; examining internet opportunities
Access	2	3	4	Supermarkets, limited restaurant exposure & co-branded prestige
Packaging	2	3	4	Mainly generic; limited linkage to Canada's favourable reputation
<b>Administration</b>				
Human resources (harv'g)	3	3	2	Highly qualified & knowledgeable personnel; some retention concerns
Human resources (proc'g)	3	3	2	Trained and experienced staff aging; recruitment issues rising
Overhead	2	2	2	SME's with limited administration requirements
Capitalization	2	2	3	Fleet & plant modernization could be stepped up in some cases
Competitiveness Rating Code: 0 = very low; 1 = inferior; 2 = mid-range (acceptable); 3 = superior; 4 = very high				

**Figure 6:** Summary table of BC urchin fishery performance *vis a vis* California and Japan.

Still, the market is faltering. BC urchin producers have been more actively marketing themselves and their products to boost their profile in Japan for the past few years, but the benefits are thus far pretty hard to pin down. At this point, price remains king and the program has not yet been able to turn the focus to something other than price. Supply interruptions because of weather do not strengthen BC's position, making deliveries less dependable with the result that BC producers are still too often seen as a fill-in supplier. Canadian prices are seen by some as too high but while this can be seen (at least in part) as a consequence of an artificially low value for the yen- it has been identified by The Economist magazine as the world's most undervalued currency, stridently insisting on that point will not help BC's image with its customers.

So- the industry continues striving to improve its performance - following up on and with studies to ID handling errors and impacts affecting quality and looking for options to deal with them. These include, for example, placing temperature loggers with the product in transit, encouraging better communication to improve logistical coordination and resolving the problems with continuity of supply - especially on the North Coast during the winter because of storms.

The rise of a Russian Illegal, Unregulated and Unreported (IUU) fishery complicated matters. This fishery produces a very highly regarded product at prices legitimate producers simply cannot match because normal regulatory limits and costs simply do not apply. It is identified in the study as the biggest problem facing legitimate suppliers simply because of the market impacts from the volumes and low prices involved. 200 - 500 tons a week are landed at the Japanese port of Hanosaki where it is picked up by Japanese processors, plugging the system and depressing prices and causing severe disruptions throughout the whole Japanese urchin products market.

It does not help that the main grounds for this fishery are extremely productive and located only hours from Japan (Figure 7). Major ocean currents collide in this area to form a natural settlement zone for larvae from along the length and breadth of Northern Honshu and Hokkaido. Widespread poaching of many other species throughout the area has removed predation pressure on young urchins in the area so there is also increased survival to harvestable size. These urchins are ready for harvest within 2-3 years which compares to the 5-7 years needed in most other



**Figure 7:** Satellite view of Hokkaido with Russian IUU fishing area extending NE of Hanosaki

fisheries. The growth of this fishery has progressed to the point where cascading effects are rocking sea urchin markets throughout Japan, reportedly now hurting even Japanese producers.



The impact of the Russian IUU urchin fishery on legitimate producers is a conspicuous example of how critical economic factors are to the sustainability equation, something that is far too often overlooked by authorities. In this case, the lack of discrimination between legal and IUU product by the market is forcing responsible producers to lower their standards to stay competitive and thereby sabotaging the advance of sustainable practices. In some cases, like the BC GSU fishery, the economics have totally KO'd the fishery.

Is this what consumers want? The Japanese people are generally honourable and conscientious in their concern for the environment and their apparent disregard of where some of their seafood is sourced is likely due to a lack of information accompanying the products. This is fixable - certification and marketing come to mind but effective market-based tools and other regulatory measures to ID and penalize companies involved are needed.

The IUU urchin fishery, and the problems described, are considered by some to be so minor that they are only a distraction from more pressing matters. This is a matter of perspective. IUU fisheries are a very big, and growing problem around the world and effective solutions are likely to require internationally recognized and applied principles, tools and regulatory policies which are coherent across all fisheries. In this case, the small size and extent of this IUU fishery and the limited number of interests involved may in fact provide an opportunity to find and test workable solutions for wider application.

What these might be are not readily apparent at this point but, because the problems involve people, solutions will hinge on being seen as the right things to do before they have a chance of working. In this case, accommodating the needs of all those involved, including the Russians, as part of the package would be fair. Their wages may be meagre by our standards and their options limited but these Russians are fishermen like any others. These guys have character and are not going to be scared off because of claims that they not playing fair, and if the restrictions or cost penalties simply get more fierce, they will likely just lower their prices and possibly be forced into taking even more risks. They will likely, however, jump at compromise solutions that work to everyone's benefit and which accord them respect and opportunity.

Back to that reference to perspective- as stewards of this little isle of wonder in the cosmos, all nations and peoples are in this together. Humanity is sort of in charge of a pretty incredible circumstance, so while in many respects our future is in our hands, preservation of the many advantages we have demands constant care and attention. This is especially so when we're dealing with each other because it is so easy to misinterpret the words, actions and intentions of others. As a result, success requires we be careful with what we say and what sort of approach we use- innovative, respectful and truthful apply nicely.

## **Industry Panel on the Current State of Sea Urchin Industry in BC**

Kiku Fisheries – devastated by Russian Fishery. Has been reduced from biggest BC urchin processor to one of smallest. The company has cut staff by 60% and has been forced to make drastic changes in hurry.

Grand Hale Marine Products– sales dropped from \$1.2m/yr to \$30k. Was 130 jobs... now no meaningful employment. Current trend... no fishery soon.

Hi-To Fisheries – from 100 workers to 30. Many causes for downturn. Need more value-added product. Very concerned about future.

Territory Seafoods – from 75 employees to 20. Biggest factor is Russia IUU. Drastic change needed. Industry is on life support.

Michael Callow (Green Urchin Assoc) – no fishery by next year. Problem is IUU, period. Only harvest 12% of TAC this year.

Bob Hegadus (Red Sea Urchin fisherman) – affects on fishermen dramatic. Fewer divers, tenders, crewmen. Costs are up and prices are down. No young divers recruiting to fishery. Safety is compromised (smaller crew sizes).

Pete Halmay (California Sea Urchin Commission) – California can compete with legitimate players. BC and California should take joint approach... interests are shared.

## **Monitoring Programs**

Don Christian D&D Pacific Fisheries Ltd.

Don provided a history of fishery from the pre-IQ times to today and outlined the many many elements and objectives (not just enforcement)and roles of the Dock Monitoring Program (DMP), funded 100% by industry. The current problems are urgent and significant. There are only 61 red urchin licences active currently (out of 110); and only 41% of RSU TAC has been caught this year to date, vs 85% at this time normally. The situation is worse with the Green urchins as less than 7% caught and the season virtually over.

The DMP costs have risen per pound of harvest, while prices have dropped. D&D knows that industry cannot afford current cost burden and is willing to look at ways to re-structure costs.

## **Science and Management**

Juanita Rogers DFO Management Biologist

Juanita provided an explanation of the “cycle” of fishery review, stock assessment, and fishery management. The relationship between DFO and urchin harvesters is key to its effectiveness. BC is a far-flung area, five regions are assessed; estimating biomass to set quotas. The fishery management toolkit comprises minimum size limits, limited entry, IQ, area licensing and area quotas with all the activities are funded by industry through a Joint Project Agreement.

We're here for the long haul and need to explore alternative ways of gaining information needed to manage the fishery at lower cost. We also need to work urgently to assess where we're going.

## **Current Update on the Japanese Market and Russian IUU Situation**

Masao Hashimoto President, Kokusai Boueki Company

Hashimoto-san is based in Sapporo and has worked with Russians for 20 years, providing him with a unique and comprehensive understanding of the problems. IUU fisheries in this area are big problems, not just in urchins, but in other fisheries like salmon and crab. Basically the impacts relates to oversupply into Japanese market.

Over the last three years, imports of urchins to Japan from Russia have exploded. He is aware of discussions between Canadian, Japanese, and Russian governments and realizes it is an international problem with much of the responsibility on the Japan side. He has some ideas to discuss privately.

## **Canada's Federal Response to Russian IUU Situation**

Gorazd Ruseski DFO International Trade and Integration Branch

IUU fisheries worldwide are problematic and represent an estimated value US\$ 4-9 billion/yr. There is opportunity to engage Russia and Japan on many "fronts." Several forums in next few months. Canada is pursuing both bi-lateral and multi-lateral discussions w/ Japan and Russia. Russia is working on its own internal plan of action whereas Japan does not appear top be. There is a apparently a fairly strong case that Japan can, and should, validate landings at ports more stringently. Japanese harvesters now feeling impacts, which will help apply pressure and Japan has obligations under international agreements to which it is signatory. UN/FAO – port state scheme – may become binding. APEC Regions – sustainable development – Canada will put forward sea urchin case study.

## **"The Collapse of Order in the Russian Far East"**

Terry Glavin Author, Journalist, Adjunct UBC Professor

Since the fall of communism, massive events in Russia have been largely ignored. In the far east "everyone's a poacher" out of simple necessity. Russia now like the "wild west" with commerce dominated by small-scale (poachers) and organized crime. A huge percentage of the Russian economy is controlled by criminals and there is a distinct lack of control over harvest of natural resources which is threatening numerous species. Harvests are clearly not sustainable. This situation is persisting, and growing in spite of the best intentions of ordinary Russians  
Opinion: something is going to "give" in Russia's far east.

## **Brand Canada**

Janice Vansickle Agriculture and Agri-Food Canada

PUHA has signed on to Canada Branding initiative. She outlined the benefits of a strong brand and the Canada Brand "promise"

“We are committed to earning our customers’ trust in Canadian agriculture and food products every day through our relentless pursuit of excellence in all that we do”.

She also went over a “template” for how agri-food producers can exploit the Canada brand, generically, and at a company level.

## Urchin Summit Part II

Given the economic crisis described today, we must develop and implement strategies to effect positive change, both short term and long term. Participants organized into working groups to tackle four broad topics: Government policy – Russian IUU Fishery; Government policy – Fishery Management/Science; Operational Efficiencies; and Marketing.

### 1. Operational Efficiencies

This is our area of direct control and we will outline steps needed to improve the bottom line, for example: Quality, Yields, Costs, Transportation and/or Handling methods.

Quality and yield – areas, times; pay higher for higher yields (color charts, tray size)

Need to respond to markets quickly – communication w/ boats, DFO, etc

Replace On Grounds Monitor (OGM) w/ electronic monitoring

Proper handling, standardize containers (bag sizes that work well)

Transportation – full truckloads, lower costs; more cooperation

Transport as it relates to quality; more awareness of Krause project. Protocols on report... extent of adoption of report (logistics study from grounds to processors)

Sharing of transportation (trucks, etc);

Handle product only once; bag out of water, product direct to tote (eliminate handling stages)

Stagger production – avoid conflicts with Russian IUU

Focus on fewer fishing areas? As cost reduction measure. Balance against conservation.

Consolidate truckloads w/ other companies and perhaps fisheries

Electronic Vessel Monitoring as cost reduction

Dockside Monitoring Program... creates extra handling; validate at processor vs grounds

Qualitative colour coding (like salmon)

Transport & handling

Quality from grounds (refrigeration)

Track temperatures, water loss

Organization to optimize efficient use of trucks, packers and processing crews

Two-day loads – cost vs quality

Tighter grading system (fewer grades); calibrate what we have.

## 2. Marketing & Value Adding

Given the realities of the current Japanese market and recognizing current budget constraints, what can we do to improve the marketability and values for our product? Specific initiatives might include Market research, Product development and/or Customer service.

PUHA continue CAFI programs... Asia, networking

More info on website to educate local & NA market

Website as tool for Japan – get feedback from end consumer... what do they want?

Promote locally on food shows/media

MSC cert. – it's a growing movement, get ahead of it (traceability could help)

MSC – expensive to gain certification... is it worth it? MSC trying to bring costs down.

MSC: Japan retailers are aware.

Greater effort on local (Canadian) market (perhaps with provincial funding support)

Consistent supply... we're not there yet (participation, weather)

Specialized marketing at boat level

Alternate product uses (eg today's soup). Vancouver chefs develop, roll out to USA;

Ship and market more to China

Processing Greens in Canada?

Nutri-ceutical/health benefits – “ocean viagra”

More trade shows to promote (not just Japan)

Control entry of Canadian product on mkt (timing) (need Russian IUU landing intel)

Processors round the world discuss “supply management”

Establish a Minimum quality threshold for export (only top/better grade(s), discard or redirect marginal quality product instead of moving through Tsukiji)

Increase Value add; eg. uni roll at local restaurants (frozen), “uni on a stick”

Packaging methods; shelf life – vacuum, MAP, canning

Domestic distributors... consolidate uni with other products

Diversify marketing effort to reduce dependence on Japan – provinces, countries, domestic

Buy local, travelling road show (fishermen to restaurant)

Product development (soups, quiches, etc).

Use lower grades for variety of products.

Rolls, cones for lower quality product

Year-round supply... we're a small producer... don't try to compete w/ big guys

Sell BC sea urchin... not just a Japanese specialty food

YVR as a distribution point

Market research – global trade, where is it going?

China is a potential growth area. China Seafood Show

Promotion – product, fishery. Canada, France, EU

Health aspects, functional food

Research on alternate product forms

Control packaging (less pack/re-pack thru to end user)

Interest in Japan in origin of product (north or south BC... what vessel?)

Awareness of IUU fisheries, implications for consumers

Pictures of smiling crews as promotional material

### 3. Government Policy: Fishery Management/Science

Given the spirit of co-management in the BC urchin fisheries, list short term cost relief strategies not compromising sustainability

OGM monitoring at plant vs. dock level validation - very expensive especially on South Coast  
Mandating compulsory licence activation (PUHA reaches income)

Or... Subsidy of non-activated licences

Buyback of licences not being used (no revenue from Aboriginal Treaty Process inventory)

Why OGMs on north and not in south? (70% of fishery in north)

Electronic Vessel Monitoring: Why is there so little East Coast vs. West Coast parity

OGM – East Coast has EVM run by DFO... West Coast: no EVM

Reduced DFO licence fees – current values based on 90-93 incomes... re-evaluate

Waive DFO licence fees if you pay the PUHA fee (incentive to participate)

Sliding scale of science/mgt costs that reflect level of landings

Budget OGM for high priority areas only (QCI, 3,4...)

Can we get away with EM only, or do we need OGM

15% water loss reduction at dock... means recovery would go up... better for fishermen

Validation at plant vs dockside

Share salary cost of research staff amongst various fisheries

Industry cannot afford programs it's committed to

Re-structure quota system to reflect participation? Incentives to participate, or benefit to those that stay in.

Reds & greens – meeting w/ DFO to go over options (next couple of weeks, before season over)... what can be done?

Short term – adjustments to science and D&D payments... things to get through this & next yr

Things have changed... make appropriate cost burden for level of fishery (we were about 7% of gross... now 25+ (Alaska legislate 7%))

We need bridge financing from DFO to get through this year (political approach)

We have to do something now...

Big picture of science & management... need appropriate G&O... workshop? Outside of regular routine. Step back. Include DFO & industry.

Science – density, biomass, population size info... is way we gain info appropriate for this current economic environment?

Better use of on-grounds knowledge (fishermen, real-time)

Or... extrapolate info across coast..

Fisheries Management toolkit – EVM, more info from fewer areas

Upshot – more meetings, don't be frozen by inaction. Coalition of DFO and industry

Consider – real time fishery info that is available vs pure science. Commitment from government to use fishermen knowledge

## 4. Government Policy: Russian IUU Situation

List specific strategies to influence positive change in the Russian urchin fishery and the Japanese market

Intense pressure on Ottawa to apply pressure to Japan first, Russia second  
 (also - get and distribute daily intel on Russian landings etc)  
 Unified group, include California and Alaska  
 Other fisheries, not just urchins  
 Some degree of involvement of Japanese and Canadian environmental interests (activists)  
 Two-front – reduce supply of IUU by working w/ AK, CA to pressure Japanese government;  
 Reduce conflict by differentiating eco-friendly product from not  
 IUU fishery not crashing. Suggest a joint science program to look at resource and how it supports this pressure?  
 Ensure follow up of international forums (Gor's presentation)  
 International summit like this  
 Pursue anti-dumping  
 Follow up on port validation req'ts  
 "Hollywood" game (sim) environment to produce vision of sustainability; give them hope  
 Gor's... won't get accomplished quickly... Russia not being quickly depleted  
 Work on Japanese landing port requirements  
 Work with Californian, Alaskan and Japanese harvesters to put pressure on own governments  
 Assume marketing strategy, fishing strategy to survive what's currently happening.  
 Make our supply consistent... don't go head-head with Russians  
 Pressure on Japan to follow port state protocol; provide solutions to Japan  
 Maintain dialogue with Russia... don't back them into corner  
 Canadian embassy in Japan... talk to Japanese fishermen... how are they affected?  
 Discussions with Russian fishermen to get their views (working conditions, price)  
 Get others onside, not just Canada  
 Engage NGOs globally  
 Roundtable in Ottawa – bring this forward  
 Coordinated approach – w/in govt, externally (AKA)  
 Work w/ Japan, not Russia  
 Work w/ legitimate fishermen  
 NGOs – focus on sustainability  
 Keep today's energy and momentum going

## 5. Other Issues    Sea Otters: they're here

### Next Steps

Emergency meeting DFO & industry  
 Ottawa – Roundtable – meet with MPs  
 Request funding from Province for MSC pre-assessment  
 Terry Glavin's help – open avenues w/ Japanese environmentalists