AN ALTERNATIVE METHOD OF FISH PRICE DETERMINATION IN NEWFOUNDLAND AND LABRADOR: THE ICELANDIC EXPERIENCE WITH FISH AUCTIONS

DAVID SMALL

An Alternative Method Of Fish Price Determination In Newfoundland and Labrador: The Icelandic Experience with Fish Auctions

By

David Small

A Master's Project submitted to the

School of Graduate Studies

In partial fulfillment of the

Requirements or the degree of

Master of Marine Studies

School of Maritime Studies
Memorial University of Newfoundland

ABSTRACT

As long as the commercial fishery has existed in Newfoundland and Labrador there has also existed a relationship of mistrust between fishermen and processor. The existence of this tense relationship is often observed most easily in the price determination system used to settle prices paid for fish in this province. While not the cause of some of the problems in the fishing industry today, price determination could never be seen as a method of solving the problems that do exist because it usually pitted harvester against processor. While many problems exist in the industry, one in particular seems to have gone unchecked for years, that is inconsistent quality of Newfoundland and Labrador seafood. Can one establish a relationship between quality and price determination that would see higher prices paid for better quality. This paper will focus on using auctions as a method of improving harvester processor relations as well as improving quality in the industry.

ACKNOWLEDGEMENTS

David Vardy, Interim Director, Public Policy Research Centre, Queen's College, Memorial University of Newfoundland for supervising this paper.

Alastair O'Rielly, Former President of Fisheries Association of Newfoundland and Labrador, for providing information.

John Boland, Fishermen's, Food and Allied Workers Union, for providing information.

Ray Andrews, Fishery Products International, for providing information.

Sigurdur Jonsson, Fishery Products International, for providing information on Iceland

Brian Delaney, Director, Planning Services Division, Department of Fisheries and Aquaculture for providing information

Ragnar Arnason, Department of Economics, University of Iceland for clarifying information.

Professor Agust Einarsson University of Iceland for clarifying information

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1. Introduction

The purpose of this paper is to study the ability of fish auctions to provide an alternative form of price determination for the Newfoundland and Labrador fishing industry. There are four issues that are of particular importance to this research. First of all, will there be a benefit to the Newfoundland and Ladrador fishery if a fish auction is instituted here? Second, how will an auction impact the quality of fish landed and processed in this province? Third, is there enough competition in the industry to operate an auction? Finally, what challenges can one expect when instituting an auction in this province? These issues are very important when discussing an auction for this province and one must consider the expected outcome prior to initiating an auction in Newfoundland and Labrador.

It will focus on the Icelandic fish auctions as a potential model that could be used here. The Icelandic auction system was chosen due to the similarities between Iceland and Newfoundland/Labrador. Iceland is an island nation with heavy dependence on the fishing industry as it has very limited natural resources to exploit other than hydro electric and geothermal power. The waters surrounding Iceland are rich in marine resources. Iceland instituted a fish auction in order to provide harvesters and processors with a method of settling prices with which both could be satisfied. Newfoundland and Labrador has a similar situation. Like Iceland, its economy has historically relied heavily on the fishing industry. The Grand Banks lie off the Southeast coast and are among the richest fishing grounds in the world, as are the fishing grounds surrounding of Iceland. Also, price determination in the industry has been a source of conflict between harvesters and processors in the fishing industries of Iceland and Newfoundland and Labrador.

The information for this paper was gathered through three methods, published reports, interviews with industry representatives, and website searches. Interviews were conducted with representatives from the Fisherman Food and Allied Workers Union (FFAW), Fisheries Association of Newfoundland and Labrador (FANL), and Fishery Products International (FPI). Most of the information on Iceland was taken from other published reports and websites. One important note is the fact that the Fisheries Association of Newfoundland and Labrador has been disbanded since the information for this paper was gathered.

The paper will be divided into six sections. The first section is the introduction which explains why the study was conducted, the method used to gather data and an overview of the structure of the paper. The second section will examine the basic organization of fish auctions and how they work. The third section will examine the Icelandic experience with fish auctions. The fourth section will describe the present situation in Newfoundland and Labrador and how auctions may influence issues in the industry. The fifth section will draw on the information that was gathered here to form a clear picture of how an auction will affect the four questions stated earlier in the introduction and to provide recommendations for the fishing industry pertaining to auctions. The final section will be the conclusion and will provide a summation of the findings.

The relevance of this research became even clearer on February 2, 2004 as the Provincial Minister of Fisheries announced his plans to implement a hail at sea fish auction for the 2004 shrimp fishery (www.gov.nf.ca, 02/25/2004). Since that point in

time the industry has fluctuated on whether or not to have an auction. The auction was slated to begin working early in June but harvesters and processors were able to reach an agreement on prices for this season. However, the auction will be examined this fall and remains a possibility for shrimp next year as well as for other species. The shrimp industry in Newfoundland and Labrador is one of the most troubled, with inconsistent quality and low prices. This will certainly be a challenge for the introduction of an auction.

2. Fish Auctions

The dictionary defines an auction as a public sale conducted by bidding, at which the highest bidder becomes the purchaser (Funk & Wagnells Standard Dictionary, 1993). Therefore, a fish auction can be described as the public sale of fish through a bidding process whereby the highest bidder would become the purchaser of the fish. An auction can be described as a mechanism whereby the value of a product is determined by what buyers are willing to pay and sellers are willing to accept. This means that a fish auction is a method whereby sellers and purchasers are able to determine the price that is to be paid for the fish product.

2.1 Auction Economic Theory

Economic Auction Theory predicts that auctions should conclude with the same price as if both buyers and sellers are independently competitive and free from the elements of risk (Latiff, 2002). According to Armstrong, (2001, as cited in Latiff) based upon the Revenue Equivalence Theorem (RET), all types of auctions will give the same result provided the following assumptions hold: 1) the bidders are risk neutral, 2) bidders have independent private values for the item being auctioned, as opposed to common values in the instance of possible resale, 3) bidders are symmetric. Symmetry means all bidders are on the same footing to the seller and to each other. When bidders are symmetric, it is assumed that all bidders have the same purpose for the product being bid on., 4) payments are functions of bids only. Any change made to these assumptions will invalidate the RET. An Invalidated RET means that the prices paid at different types of auctions will not be the same. This means that as certain assumptions are relaxed, certain types of auctions may be more beneficial to

the buyer or seller. The auctions will not result in the same price. An English auction may result in a different price than a sealed bid auction.

An example of this can be seen in the Newfoundland fishery. Under an auction all bidders may not be symmetric. Many harvesters have close financial ties to processors who have funded their enterprises. Therefore if those processors were to bid on a lot of fish, there may be some influence to sell to that buyer at other than the price that was bid. Factors such as a sense of loyalty or legal agreements that were signed between processors and harvesters may factor into the selection of the purchaser.

Another example could be the high risk factor involved in the Snow Crab fishery in this province. Because of the high demand for, and short supply of, Snow Crab, this could be a very risky business for those bidding on the product. If processors are not able to secure enough products, they may run the risk of high financial loses. Therefore a buyer may make a bid that he/she knows will result in a loss but will allow him or her to remain in the market. It is important to consider these factors when deciding on what type of auction will be utilized. The types of auctions will be examined in the next section.

2.2 Types of Auctions

There are three types of auctions that have been used to sell fish; the English model, the Dutch model and the first-price sealed-bid system. Under the English system, the auctioneer calls out higher and higher prices until the last buyer remains. This is the most common type of auction in use today (Nordco Limited, 1987). The Dutch

system works in the opposite manner with the auctioneer calling out successively lower prices until one bidder accepts the price (Nordco Limited, 1987). Dutch auction systems usually result in higher prices because bidders are afraid to let the price go too far for fear of another buyer getting a lot that they desire. Finally, the first-price sealed-bid model works in a similar manner to a tendering system with buyers submitting sealed bids directly to the seller (Nordco Limited, 1987). The seller than chooses the highest bid. A variation of this auction allows for the winning bidder to pay the second highest bid that was made (Milgrom & Webber, 1982 as cited in Latiff, 2002).

Fish auctions can be further sub-divided on the basis whether or not the goods are seen prior to being auctioned off. Auctions that offer the goods to be viewed are known as display auctions. Display auctions allow the buyer to view the quality of the product prior to bidding, thereby allowing the buyer to determine an appropriate bid for the goods. An auction where the buyer does not see the goods prior to bidding is known as a sight unseen auction. In this case the seller provides information about the product to the buyer. The sale is then based on this information. After the lot has been sold, the final price will be determined through negotiations between the buyer and seller over any discrepancies that may exist between the product that was described prior to the sale and the product that was delivered to the buyer (Nordco Limited, 1987).

2.3 Fish Auctions: The European Model

One of the major players in the fishing industry with respect to the use of fish auctions has been the European Union (EU). Some countries in the EU have used the auction

system for many years and have considerable experience in effectively running such a system. Therefore it is a good place to begin examining how a fish auction is set up and how it works. For the purposes of this discussion, the main source is Fish Business Management, by Andrew Palfreman of the University of Hull. This book deals in detail with the fish auctions of the EU.

2.3.1 Evolution of European Auctions

Before discussing the European model of fish auctions, it is important to discuss why these auctions evolved in this part of the world. That is to say, is there anything special about Europe that is conducive to fish auctions working in a successful manner? In his 1977 report for Elston Food Consultancy, Robert Blair outlines the four reasons for the development of auction systems in Europe. First of all, there was a need to transport fresh fish quickly. The processors of Europe had found that there was a large market for fresh fish; therefore the need arose to get it to market fresh. Auctions meant buyers could influence the harvesters to land their catch sooner by paying more at the auction. Secondly, the sellers of fish needed to find the largest concentration of buyers in order to counterbalance their weakness as sellers of a highly perishable product. Thirdly, large markets for fresh fish existed in close proximity to the fishing ports. Finally, the system could be justified by the proximity of the fishing grounds to the population of consumers. According to Blair all of these conditions are essential to operate an efficient fish auction system.

2.3.2 Establishing an Auction

The first step taken in most cases when starting up a fish auction in the EU is forming a Fish Producers Organization or FPO. This is a voluntary organization of fishing

vessel owners and operators that allow them to enter joint arrangements for the production and sale of their fish, as defined by EU regulations. Essentially this allows those that catch the fish control over the conditions of sale. Those that catch the fish are able to take the sale of fish out of the hands of fish selling agencies and expose it to a more orderly, transparent system that allows them to exercise some control over the condition of sale of their fish products. It is important to note that EU fishing regulations encourage the formation of such organizations. Consequently, because these organizations are formed with the support of EU regulations, they come equipped with legal support in the decisions that they make (Palfreman, 1999).

With the FPO in place, the first task is to identify the auction site if a display auction will be used. One might assume that sites closest to the fishing grounds would be optimal for a fish auction but this may not be the case. Because the success of a fish auction depends on the availability of participants to bid on the fish, it may be more important to locate a fish auction in an area that will allow a larger audience of bidders. This may mean that the fish may be landed farther from the fishing grounds than would be considered efficient, but the increased competition amongst bidders may make it more effective (Palfreman, 1999).

In the event that FPOs do not want to set up their own auction site, an alternative can be found in the use of an independent, commercially competing fish selling company. These companies handle the selection of a site and charge a commission to the harvesters. The problem with this for the harvesters is they now give up a portion of the control that they once had in the sale and marketing of their fish. Therefore, it is

important for these companies to show fishermen a substantial benefit from using their services if they want to succeed (Palfreman, 1999).

The rules governing who can operate a fish auction in the EU are very stringent. With the exception of businesses that are set up specifically to run auctions, no other group may run an auction unless it is an FPO or has the support of an FPO. Rules governing the setting up of auctions permit FPO's to operate fish selling agencies, own a company with other investors, and licence other companies to operate auctions (Palfreman, 1999). These rules allow sellers a high level of control over how their fish is sold and marketed. The FPO also decides how many of these agencies can be selected to sell the fish. Depending on the circumstances, the FPO may decide to select more than one company to sell the fish. However, this decision may be limited by the customs and practices of the port in which the fish is sold (Palfreman, 1999).

Upon being certified by the FPO as a fish-selling agency, the company will be referred to as the Fish Auction Company (FAC). The FAC then has the responsibility of locating and securing the fish auction facilities. Such can be owned, leased, or rented. They are often owned by harbour authorities (Palfreman, 1999). By using facilities that are already in existence, the FAC can reduce the start up costs that would otherwise occur when building a new facility. The FAC is usually a small company with only a few employees. However the company does have a board of directors, which has the responsibility of running the company. The importance of the board of directors cannot be overestimated. For the directors, the interests of the company are supposed to take first priority. Directors who have been found to

operate in a manner not conducive to the efficient running of the company, or have attempted to defraud investors can be held legally responsible (Palfreman, 1999).

One of the biggest concerns for both buyers and sellers in the fish auction today is the ability to deliver a safe, high quality product to the market place. At the end of the day, if the consumer is not satisfied, the auction will not be a success. To ensure that auctions are safe for the products that they handle, the EU has set down guidelines to be followed at the auction site. Meanwhile, buyers bring pressure on suppliers to produce a product that has been stored at hygiene and temperature levels sufficient to meet the criteria of the consumer (Palfreman, 1999). Of course, in order to increase the quality of fish usually means an increase in the cost. This increase in cost has to be successfully absorbed by the auction system to make it profitable. This can be difficult with species of fish that have low value on the market but require the same level of maintenance as high-end fish. Still, the importance of safe fish for the consumer must be a high priority for buyers and sellers alike.

2.3.3 Responsibilities of Buyers

Upon completion of the set up of the auction system, the day-to-day operations will begin. The time in which the auction begins will be reached through negotiations between the FAC and the buyers. The time depends on when the buyers would like to begin the processing of the fish or when they would like to be able to ship their purchase to other customers (Palfreman, 1999). Most auctions will begin at approximately 7 A.M (Palfreman, 1999). It is very important that the product be processed as quickly as possible so as to provide the highest quality product.

In theory it is possible for anyone to bid on the product being sold at the auction. However this may not be desirable for the FAC. The FAC may want a guarantee by bidders that will allow the FAC to recover funds if the buyer fails to meet the financial responsibilities set forward in the bid. Guarantees are seldom used in the fish auction system for several reasons. First of all, guarantees are expensive for the buyer to purchase; therefore the buyer often opposes them. Secondly, it is difficult to predict how much the fish will sell for. Consequently, many guarantees are often significantly less than the market-clearing price. The result is an amount to the FAC that makes a guarantee hardly worthwhile. Finally, as in most industries, those that are reliable in both word and reputation can usually be trusted to pay for their purchase. This honour system makes the use of guarantees obsolete (Palfreman 1999). While guarantees may not be necessary in most auction systems, they may be useful in the early life of an auction. In the start up phase of an auction, it may be difficult to assess the reliability of a buyer. Or, there may be a period of adjustment as both sides become accustomed to this new method of selling.

The bidding begins when the auctioneer invites bids from buyers on lots. Lots are one or more boxes of fish of the same species, size, and freshness. Buyers will express a price per unit, (usually in kilograms), to the auctioneer. These bids will then increase until there are no more bids for the lot of fish. When the bidding ceases, the buyer with the highest bid is allowed to select how much of the lot he or she wishes to purchase for that price. It is not required that the buyer take the whole lot of fish. This is known as the 'one or all' principle of fish auctions. When the buyer has selected the amount of fish he or she wishes to purchase for that amount, the rest of the lot is put up for bid again. This continues until the entire lot of fish is sold. Once

the fish has been sold to the buyer, the buyer is then required to remove the fish from the auction site (Palfreman, 1999).

It is the responsibility of the auctioneer to note the identity of the buyer in the event that problems occur with the purchase. The actual purchase of the fish varies. Some FAC's will allow the buyer to take the purchase on credit while others insist on payment before the fish is moved. Payment must include all costs including taxes, levies, etc. In the event that credit is used, some FPO's have found that some system has to be instituted in order to manage the credit. This may mean a time limit upon which full payment must be made. In cases where credit is used, guarantees are often required (Palfreman, 1999).

Once the fish has been purchased it becomes the responsibility of the buyer. Any damage that occurs to the product after the purchase cannot be held against the FAC. In the event that fish purchased is not taken away, the FAC has several options. First of all, they can take legal action against the buyer for breach of contract. They can rescind the sale of the lot or any other lot of the buyer at that auction or any other auction. They can resell the fish by auction or private sale. Finally, they can dispose of the fish in some other way. However, this does not mean that the buyer is free from any financial responsibility. If there is a difference between the bid price of the buyer and the subsequent price received for the fish, the original buyer is required to pay that difference (Palfreman, 1999).

2.3.4 Responsibilities of Sellers

There are also responsibilities to the seller in the fish auction. The seller is not able to sell fish unless he or she is the true owner of the catch and can legally transfer title to the buyer. By agreeing to sell the fish through the auction, the seller also agrees to pay a commission to the auction company. This commission is usually in the order of three percent but can vary somewhat between auction sites. If the FAC is unable to sell the catch, it must notify the seller immediately. The seller then has the option of offering up the lot again or removing it from the site. In the event that he or she chooses to remove it, they are responsible to pay any expenses that the FAC incurred while holding the fish. Payment for the sale of the fish to the seller is prompt, usually within the day of the sale. Sellers should receive a Sales Note with their payment that shows all deductions as well as quantity sold and the price received for the sale. This highlights the importance of quick payment of the buyer for the sale to allow the FAC to pay the seller quickly (Palfreman, 1999).

2.3.5 Responsibilities of FAC

While both the seller and buyer have responsibilities to the FAC, the FAC is in turn, accountable to the seller and buyer. Probably the biggest part that the FAC plays is in the supply of information to its customers. This includes a daily report of the volume, species, size and grade of the fish expected to be on the market that day, a summary of the transactions for that day, and a daily list of offers to buy fish from outside the auction. As well, the FAC should prepare a forecast of expected supplies of fish for buyers and sellers and a monthly statement of the value of fish sales, volume, species, size, and grade for the buyers and sellers (Palfreman, 1999). By doing this, it allows

those using the service to make sound economic judgements that should be to the benefit of the industry as a whole.

The fish auction is also able to use its own discretion for fish sales outside the fish market. For example, if the company feels that it is able to improve the value of the fish by selling it outside of the auction, it is allowed to do that (Palfreman, 1999). It is important to keep all members of the FPO informed of these actions. This allows the FPO to feel that all of its members are being treated fairly and are open to the same opportunities as other members.

Finally, auction systems in recent years have experimented with the sale of farmed fish as well. Usually an auction will notify buyers before hand if farmed fish will be available. This is done to generate interest on the part of the buyer and to boost the price for the seller. If the product is unable to generate a reserve price then it can be withdrawn from the market (Palfreman, 1999).

2.3.6 Dutch Auction System

While this is the general method of fish auction operation in the EU, there are some variations practised in other systems. As stated above, most auctions are voluntary. Individuals have the right to take part in the auction if they choose to do so. However, under the Dutch auction system, an Auction Master is contracted by the government to run the auction. Also, the auction itself can only be established by an act of parliament. The persons who take part in such an auction are not voluntarily doing so but are bound to do so by law. The Dutch system works on a descending price scale. The initial bid for the lot of fish starts very high and then descends.

When the price arrives a point at which the buyer wants to buy, the buyer intervenes and chooses the amount of fish to buy at that price. Then the bidding resumes (Palfreman, 1999).

2.4 Electronic Auctions

With the advent of new technology in almost all sectors of society, it should not be surprising that electronic technology is now becoming increasingly common in fish auctions. Countries such as the Netherlands, France and Belgium now employ what is known as the computerized auction system. Essentially an auction 'clock' replaces the auctioneer and a computer records the details of each sale from the different vessels. The 'clock' has either a figurative rotating arm or a rapidly changing price that the buyer can stop remotely when a price is reached whereby they feel it is a good time to buy. Each successful sale is entered into a computer manually, which calculates a sales return for the vessel and a few hours later a sales return is issued for the vessel.

Since the introduction of computers into auctions there has been a significant increase in the use of electronic auctions as well as an increase in what can be done through an electronic auction. In October of 2001, *Fishgate* began operations in the port of Hull on the northeast coast of England. This state-of-the-art fish trading centre has several advantages over other fish auctions. First of all, the entire operation uses a chill system to ensure that the temperature remains constant for the fish. The fish are constantly held at 2 degrees Centigrade, except when it is being graded, when the temperature is increased to 12 degrees. This type of handling helps to ensure high quality fish. (Seafood International, 2002). Another difference with the *Fishgate* is

the ability to trace fish from the area and time where it is caught right through to the point when it is sold. The ability to do this has become very popular with buyers as they now are able to buy fish from a particular harvester. The ability of *Fishgate* to provide these services lies in the use of electronic technology. From the cleaning systems to the weighing and grading to the temperature control, computers control everything. However, this use of technology is not confined to the control of these systems. Soon, *Fishgate* will be introducing internet trading into its services. This introduction will allow the auction to connect with service providers as well as buyers across Europe. The ability to do this allows *Fishgate* to attract a wider audience for its auctions. This allows a larger marketplace than it could possibly have if it remained as a display auction confined by physical boundaries. Buyers from all over Europe can buy fish from this auction without ever leaving their offices. This offers a tremendous advantage to the *Fishgate* auction.

According to some sources, one advantage of electronic fish auctions from a sellers viewpoint is the ability to reduce the likelihood of rigging during a floor auction. If buyers are congregated on an auction floor, the opportunity to rig auctions among themselves is present but, electronic auctions allow bidders to bid from outside the auction site without joining together with other buyers. This means there is less opportunity for buyers to collude (Seafood International, 2001). This argument is weak at best, collusion has seldom been seen as a problem in auctions and buyers do not need to be on the auction floor in order to try and keep prices down. It would appear that if collusion is a problem, it may be due to a lack of buyers involved in the auction. This highlights the greatest benefit of electronic fish auctions in that buyers are able to bid on a lot while separated by physical boundaries. Therefore buyers that

were unable to bid before because of distance from the auction floor now have the ability to do so. Another benefit for buyers is the ability to bid on fish at more than one auction site. If they lose out at one particular auction, they may be able to capitalize on another while never leaving their office. This is very efficient for the buyers. If the buyer is hooked up electronically to multiple auction sites it will spare them the trouble of deciding on which auction to attend. For the seller, this means increased competition for their catch that should generate an increase in prices.

2.5 Summary

The European fish auctions were established in order to provide a closer link between the landing of fresh fish and the consumer. The system has continued to evolve over time into a very technologically reliable system that allows buyers from all over the world to bid on fish through the Internet. This continued evolution manifests the confidence that all participants have in the auction system. The auction system provides an openness to the European fishing industry that appears to have satisfied those that take part in the industry. Also, the rules and regulations that govern the industry appear to have the best interest of the industry in mind with all participants having guidelines and responsibilities. The ability of the auction to continue to expand shows the effectiveness it has as a price determination mechanism.

The expansion of auctions to allow more buyers into the market has advantages for both buyers and sellers. Sellers benefit from increased competition that drives up prices. Buyers benefit from the ability they now have to put a price on the quality of fish they wish to buy as well as increasing quality as sellers attempt to increase quality in order to obtain better prices. Under a system that does not reward quality,

such as one price for all landed fish, neither buyer nor seller has an incentive to increase quality.

3.0. History of Fish Pricing in Iceland

Up until 1961, pricing was a major source of tension between those selling and those buying fish in Iceland. As a result, the Althing (i.e. government) of Iceland introduced legislation that established an official process for determining prices paid for fish. This process is known as the Fishing Industry Price Determination Board. The Board is made up of two tiers. The first level consists of six representatives of the fish harvesters unions and six representatives of the boat owners associations. If this group cannot decide on a price, the dispute moves to the second tier. This tier is made up of two representatives from each group as well as a member appointed by the government. Decisions are made by simple majority rule. The problem with this type of system was that the distribution of influence was not equal between harvester and owner. Vessel owners were able to manipulate the decisions of the board. As a result prices paid for wet fish (or fresh fish) in Iceland were often 30 – 50% lower than those paid for the same fish on continental Europe. Another problem was that the negotiated price was supposed to be set as a minimum price. However, the result was often the minimum price being the selling price. The only alternatives for Icelandic harvesters were to either ship their catch directly from their boats to market or to ship their catch freshly iced in containers. This system continued until the late eighties when it came under criticism for being inflexible to changes in market conditions. The outcome of this criticism was the introduction of special legislation that permitted the establishment of wetfish auctions in 1987 (Arnason, 1995).

3.1 Icelandic Fish Auctions

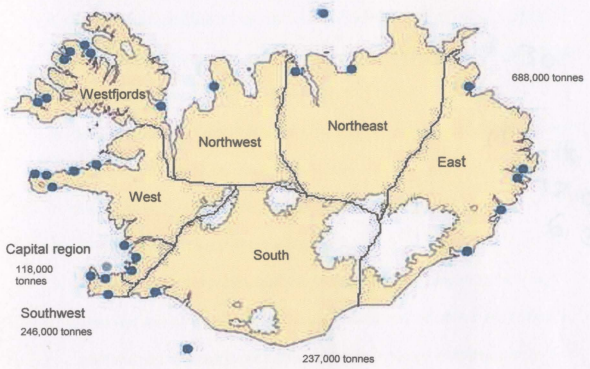

Figure1: Distribution of auction sites as of 2002.

The normal fish auctions between buyers and harvesters in Iceland are divided into two categories, Islandmarkadur and Reiknistofa Fiskmarkada (Arnarson &Trondsen, 2003). These two auction markets came about as a result in differences in software and bidding methods. Prior to this, there was only one market (Latiff, 2002). Islandmarkadur uses the Dutch bidding system while Reiknistofa Fiskmarkada uses the English bidding system but a buyer is free to buy from any of the two auction systems. Each market has between 15-19 smaller sub markets distributed around the Icelandic coast. (Arnarson & Trondsen, 2003). These fish auctions have a number of primary functions including:

1. Recording information about supply of fish prior to the auction taking place.
2. Recording information about sales during auctions.

3. Supplying and maintaining connections to remote auction places, if auctions are located in more than one place.
4. Maintaining detailed information about consumers, buyers, and sellers.
5. Maintaining information about fees to be collected by the fish market from buyers and sellers.
6. Issuing invoices to buyers and keeping track of payments and information about buyers' credit balances in real time.
7. Preparing and issuing financial statements to sellers.
8. Offering computerized dial-service for buyers.
9. Serving as an information database, which includes supplying various sales reports and other information, and statistics, which are available for any time period since implementation of the systems (Arnarson, & Trondsen, 2003).

3.2 The Auction System

The day begins with staff of the auction company entering all pertinent information into the computer. This includes information received from the ships about their catch as well as information on transportation as well as service charges. If vessels do not submit their catch data by a certain time, it will be carried over, to be auctioned on the following day. The information from all the smaller markets is sent to one central computer located at the main auction house. All the information received from each market is compiled on one list and distributed for the use of buyers. This will mainly consist of information about the vessel, type of fish onboard, condition of fish, fishing gear used, etc (Latiff, 2002).

As the auction begins, the operator at each smaller sub auction will enter into the computer how many buyers are bidding. Under the English system, the price will continue to increase until only one buyer remains. At this point, the price on the clock is the price to be paid by that buyer. A credit check is done on that buyer. At the end of the week, all invoices will be sent to each buyer for payment due to the auction house. The auction house will then pay the seller (Latiff, 2002).

3.2.1 The Catch

When the catch is landed it is weighed twice: first at the landing harbour authority (gross weight), and, again, at the fish market scale (net weight). At this point the auction house will take charge of the catch. The auction company has implemented the Hazard Analysis Critical Control Point (HACCP) to ensure the safety and quality of the catch (Latiff, 2002).

3.2.2 Disputes

If there is any dispute between the buyer and seller based on wrong information about the catch, the auction house will act as the arbitrator. The seller must accept the price that results from the bidding at the auction. If there is a disagreement on the size or quality of the catch, a representative from the auction house will decide the outcome. If the buyer's claims are accepted, the seller has to pay compensation. If the seller's claims are accepted, the buyer has to pay compensation. If there is a great discrepancy between descriptions on the auction list and what the buyer has bought, the buyer may revoke the sale. If the auction house receives a considerable number of claims about a particular seller, they reserve the right not to conduct business with that seller in the future (Lartiff, 2002).

3.3 Iceland's Fish Auction Influence

The sales of fish in Iceland can be divided into four categories: sales through auctions; sales through foreign auctions (containers); landings by Icelandic vessels abroad; and contract sales. Traditionally, sales of fish have been through contract sales and the landing of wet fish trawlers abroad (Arnason & Trondsen, 2003). The growth of auction sales has been steady since it was introduced in 1987. In 1988, the first full year of the auction operation, sales of fish through the auction accounted for 9% of total sales. In 1996, 32% of fish landed in Iceland had gone through the auction. At the same time, contract sales fell from 75% to 57% and foreign sales have fallen to 11% during that same period (Arnason & Trondsen, 2003). These results show how successful the auction market has been to the Icelandic fishery. These findings show the effectiveness of fish auctions in Iceland to curtail the amount of fish it was losing to outside markets.

3.3.1 Price Determination

Perhaps the greatest measure of whether or not the Icelandic auctions are effective as a system of price determination can be found in the prices they pay as compared to contact sales, as well as prices paid at mainland European auctions. A comparison of the prices paid at auctions and through contract sales between 1988 and 1996 show that auction prices in Iceland have been almost twice as high as contract sale prices (Arnason & Trondsen, 2003). These prices mean a considerable recovery of revenue for fishermen who sell to an auction as opposed to selling through contract sales. Between 1994 and 1996 this difference was reduced considerably, but this appears to be a function of auction prices raising the prices paid by contract. A comparison of Icelandic auctions with U.K. auctions shows that Icelandic auction prices are lower

than their counterparts in the U.K. However, when export penalties are added into the equation, Icelandic prices and U.K. prices are very similar (These penalties are assessed to curb the amount of fish being exported into the U.K. market and are manifested in quota reductions of 25%.)(Arnason & Trondsen, 2003).

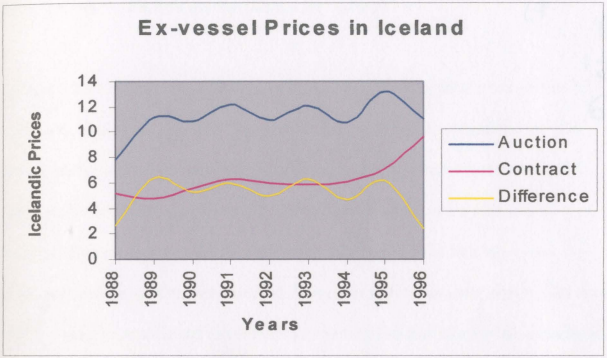

Figure 2: Differences in Prices paid through auctions and contract sales, 1988- 1996.

3.3.2 Quality

While prices have shown considerable increases in both auctions and contract sales, it would be erroneous to assume that an increase in quality has also occurred. That is not to say that Iceland has poor quality. Iceland has very good quality fish. But it does not appear that the introduction of an auction has increased the quality to any substantial degree.

There are a couple of reasons that have been put forward to explain this phenomenon. First of all, according to Sigurdur Jonsson (personal contact, Fishery Products

International, 2002), quality has not improved in Iceland simply because the auctions are operating in a sellers' market. Demand exceeds supply in the Icelandic fisheries at this point in time. Buyers are forced to buy poorer quality fish simply because they have to in order to fill their orders. There is less pressure on harvesters to produce better quality under these circumstances because buyers are forced to compete with each other not for the best quality fish but for market share.

Secondly, the distance between landing sites and processing sites is often quite a distance to transport fresh fish. The further fish has to be transported before it is processed, the more time it spends decomposing and the result is a poorer quality product. However, the two auction market systems (Islandsmarkadur, and Reiknistofa) have developed a new company that owns all the fish boxes and containers that are used to transport fish. The buyers then rent these boxes. The result of this system is an efficient method of transporting fish that allows fish to reach its destination that same day (Arnarson & Trondsen, 2003). This type of cooperation helps to cut down on transportation costs and produces an effective method of improving quality by streamlining the transport system.

It would appear that most buyers are confident in the quality of fish that they are receiving through the fish auction as 75% of the fish that goes through the market is sold before it is landed (Latiff, 2002). This is due to the ability of buyers to purchase confidently based on the reputation of harvesters to be consistent in the quality that they land.

3.3.3 Industry Organization

Presently, there are two categories of vessels in Iceland, vessels that are owned by processing plant owners and those that are not. The fish auctions receive most of their fish from those that are not owned by the owners of processing plants. These vessels also tend to be smaller than the vessels that do not land to auctions. However, some of these processor-owned boats do contribute to the auction. For them, the auction is an outlet for surplus (Arnason & Trondsen, 2003). Here, it is easy to see some of the similarities that exist between Iceland and Newfoundland. In this province right now, there are two types of harvesters, larger boats that are owned by processing companies and smaller boats owned by independent harvesters. It is important to note that for some of these smaller boat owners, while their fishing vessels are not owned by the processors, the harvesters are indebted to them, as processor-financing was used as a method of securing financing for the expansion of their enterprises. It would appear however that if an auction were implemented in Newfoundland and Labrador, it would be the smaller boats that would most likely use it. Larger vessels that are owned by processing companies would rarely use these auctions unless as in Iceland they would be used as an outlet for surplus catch.

One unforeseen benefit of operating an auction in Iceland has been the increase in the number of smaller processing companies. When the fish auction was originally instituted, it was done as a method of determining prices for fish. Also, prior to the fish auction, if a processor bought fish, he/she was required to buy the whole boatload. This often meant buying fish of various species and quality. It also meant that the larger, more financially secure plants, were the only plants that could do so. These plants specialized in processing large portions of semi-processed fish. The

auction has allowed processors to buy smaller lots of fish as well as providing an outlet for fish that may not have been profitable for larger companies to process. This has led to smaller processors entering into the industry and creating niche markets. These processors are able to buy smaller quantities of fish that may be rejected by larger companies and tailor them to meet a specific market with a very high quality product. This has been one of the major contributors to the increase in the value of landings, despite a decrease in the quantity of cod in Iceland (Arnason & Trondsen, 2003).

3.4 Summary

In summation, it appears that the Icelandic experiment has been successful based on the following reasons. First of all, there has been in overall increase in prices paid for fish at auctions as well as through contract sales. While this may not specifically be the result of the fish auction being instituted, (other factors such as an increase in demand may be at work), it is also true that prices have not fallen under an auction. However, it remains to be seen what would happen in a buyers market. Perhaps even more important is the ability of buyers to buy fish unseen and be satisfied with the level of quality they receive.

At first the reorganization of the processing sector would appear to be a negative occurrence for fish auctions. Since fish auctions have been utilized, larger companies through consolidation, have replaced many of the medium sized companies. This usually means less competition and fewer jobs in the industry. However, larger companies are better able to compete on global markets. Meanwhile, a number of small companies have entered into the industry to replace the jobs that disappeared

when the medium sized companies were removed. There has been a change in the size distribution of fish processing companies in Iceland that has replaced medium sized companies with larger more globally competitive companies and small companies with few employees that target specific markets with perhaps one type of product.

Finally, because of the higher prices and the increased competition in the Icelandic processing industry, Iceland has been able to reclaim much of the fish that was being landed at ports in other parts of Europe. As a consequence, the value of the fishing industry in Iceland has increased. The use of fish auctions in Iceland has shown that the fishing industry can survive, and even grow, despite limited amounts of resources.

While the fish auction in Iceland has been a success for buyers and sellers in the fishing industry, it will not solve all the problems of the industry. For Iceland, the ability of the auction to continue to satisfy the needs of buyers and sellers lies in the ability of the companies in Iceland to compete in a global market. The auctions should continue to operate as long as processing fish in Iceland is viable. Also, auctions are unable to influence fish stocks, the demands of consumers, or the fisheries of other countries. As a source of price determination, auctions work very well. But these auctions are subject to other forces that are uncontrollable, just as other forms of price determination are as well.

4.0 Fish Auctions In Newfoundland & Labrador

This province has had very little experience with auctions as a method of price determination. However, it is not a totally new concept. During the mid-eighties, the Provincial government operated a fish auction. At this time, the Newfoundland government was operating a group of middle distance vessels that were fishing for groundfish. These vessels were operating under the premise that high quality fish could be landed in this Province. Therefore they employed fishing tactics and technology that would give them that high quality. It is also very important to remember that at that point in time most of the fish that was being landed in the inshore fishery was of very poor quality. The result was competition among the buyers for who would have the opportunity to buy this fish for the same price that was being paid for the poorer quality inshore fish (Alastair O'Reilly, personal contact 2002).

The government decided to take advantage of this situation by auctioning off the catch from their middle distance fleet. The government would inform buyers of the time and place that the vessel would arrive and the amount of fish onboard. Buyers would then submit bids on the catch. Quality was determined by an independent grader and prices were based on Grade AA quality fish. Prices would be 70% of the Grade A price for Grade B Cod and 30% for Grade C. The result of this system proved to be very successful for the government, as they would receive prices considerably higher than those paid for inshore cod, sometimes fetching prices twice as high. Under these circumstances, a fish auction proved to be a very successful operation (Alastair O'Reilly, personal contact).

4.0.1 Price Determination in the Present

In 1997, the opening of the Newfoundland and Labrador Snow Crab season was delayed for three months by a price dispute between harvesters and processors. This disruption in the industry was significant enough to cause the provincial government to appoint a task force to study the price settlement mechanisms and to recommend alternatives that would prevent such disputes in the future. Numerous recommendations were made but two in particular, standout at this time. Included in these recommendations were final offer selection, which has been used extensively and fish auctions, which this research is focusing on.

While little has been made of the recommendation of instituting a trial fish auction, final offer selection was implemented as the main method of finalizing minimum prices for most species in this Province. In final offer selection, both sides attempt to negotiate a price for the upcoming fishing season. If they are unable to come to an agreement, the process will then be handed over to an arbitrator who will look at the arguments put forward by both sides and then pick a price that seems reasonable. That price will then be used as the minimum price for that season. Since that system was implemented, prices have been settled on time and the fishing season has been underway at its normal and optimal time. Both sides appeared to be happy with this system.

However, recently the Fisheries Association of Newfoundland and Labrador (FANL) decided to opt out of final offer selection. The former president of FANL, Alastair O'Rielly argues that while final offer selection was very effective at settling prices, it did little to solve other issues, claiming that the process is weighted in favour of the

union (Navigator, 2003). Meanwhile, trying to avert any type of disruption, the provincial government introduced legislation that will ensure that final offer selection will continue for one more year. As collective bargaining did not work, and now final offer selection is in danger of collapsing, what alternatives are there for the future? Does the answer lie in instituting a fish auction as a method of price determination in this Province?

4.1 Issues in the Newfoundland & Labrador Fishing Industry

The 1998 Task force outlined various issues with respect to price determination in its report such as the effects of the 1997 strike, trust and transparency, competition, port designation, legislation, quality, marketing, outside buyers, the resources, research, timing and conduct of negotiations. These issues provide a wide variety of problems in the industry that need to be addressed. The question is: can a fish auction aid in the resolution of any of these problems?

4.1.1 Collective Bargaining.

Since 1971, collective bargaining has been the process whereby prices have been set in the fishing industry in this Province (Vardy et al, 1998). It was under this system that both parties would agree on a price. While the purpose of an auction may be to determine the price paid for raw material, would it be necessary for collective bargaining to still exist as a safety net? As mentioned earlier, when Iceland implemented its fish auction, it was decided that the Fishing Industry Price Determination Board would continue to set the minimum price that could be paid to fish harvesters. Eventually, it became unnecessary to set these prices as auction prices seldom dipped to these levels.

The FFAW contends that any fish auction would have to be supported by legislation that would force all fish landed in this Province to go through that auction (John Boland, personal contact, 2001). If this were the case, there would be no need for any other form of price settlement to occur. While not in agreement with the need to send all product through the auction, FANL does agree that collective bargaining would not be necessary. In fact, FANL were not convinced that collective bargaining should exist now, since as soon as negotiations are completed, the real prices are settled among processors and harvesters in private negotiations (Alastair O'Rielly, personal contact, 2002).

4.1.2 Quality.

One complaint that the Newfoundland and Labrador fishing industry has consistently held is the inconsistency of the quality of its seafood. One area where fish auctions could, in theory, make a major improvement for the Newfoundland fishery is in this area. At the heart of the auction system is the premise that people will pay more for a better product. Therefore those that are able to return a better product to the shore will be compensated significantly more than those who do not.

Take for example the Northern Shrimp Industry. Over the past few years, much of the problems with shrimp quality have been attributed to the inshore fleet. Because of the small size these vessels were limited in their ability to carry shrimp in a manner that can produce the best quality. Most boats have to bag their shrimp instead of using insulated boxes, and only four boats are permitted to freeze at sea. Still others are of such small size that they are forced to sacrifice quality for quantity. This

results in a significantly poorer quality of shrimp. Yet because of the method of price settlement, there was no incentive for boat owners to take action to improve quality. Boat A with poor quality shrimp received the same as boat B with excellent quality shrimp. An auction system could be the simplest method for improving this problem. Buyers could decide to pay more for good quality shrimp if it is more valuable to them. There may be other methods of improving quality such as improving trucking distances and decreasing the amount of summer harvesting but auctions create an openness that would allow fishermen to see the benefits of trying to improve quality.

Most agree that in theory a fish auction would improve the quality of fish but, it may not happen independent of other changes in the fishery as well. One concern brought forward by the FFAW (John Boland) is the fact that much of the problem with quality in this Province lies in the inability to land resources at the optimal time of year. Presently, most fishing activities take place during the summer months when warm weather increases the decay speed for fish landed. Part of the problem here lies with the vessel replacement rules that forbid fishermen from using larger vessels that would allow them to fish in times of the year when conditions are bad but quality would be improved. While fishermen may be able to make improvements onboard their vessels that could improve quality, they are still unable to fish when it would be optimal for the industry due to these restrictions.

Mr O' Reilly is not convinced that the introduction of an auction will necessarily result in better quality. He points to the time of the year that catches are landed coupled with the distance that much of the fish has to be trucked. A major problem for processors is the distance from the fishing grounds to the processing plants. It is

not uncommon, especially during gluts, for product to be waiting two or three days on trucks in the middle of summer to be processed. All the while it is waiting it is losing yield and losing quality. He also points to the inability of processors to coordinate trucking schedules. It is not uncommon for trucks to leave an area empty while fishermen are awaiting the arrival of a truck to take their catch. It may be plausible that fishermen could improve their quality to better take advantage of an auction but if the processor cannot receive it in an optimal time, there may not be a net gain to the industry.

4.1.3 Competition.

Another premise of an effective fish auction is plenty of competition. Presently in this Province there are various sizes of buyers from big multi-national companies to smaller companies with only one plant in one small community. It is difficult in any industry for small companies to compete with larger companies, especially when competing for limited resources. Therefore this may present a problem with any future fish auctions in this Province. If larger companies are able to outbid smaller companies for better products, it may lead to a situation where smaller companies are left to buy inferior raw material because they do not have the financial resources to compete for better quality product. Companies that are in a better financial situation whether large or small will have a significant advantage in this market. If this holds true, can these smaller companies be expected to continue to exist under such conditions?

This may not be a problem according to the FFAW simply because plants are only able to process a limited amount of product at a time. It would not make sense for a

plant to buy a large amount of product at an above average price and then have it deteriorate aboard trucks while it is waiting to be processed. This is a problem under the present system but makes even less sense under an auction. Another problem is that any company that buys a product above what it will sell for and then allows that product to decline so that it is even less valuable will have a tough time remaining in business.

FANL (now defunct), on the other hand, had expected that under an auction there would be negative impacts on the smaller plants, especially those plants that due to their geographic location, are disadvantaged by distance. According to O'Rielly, before the industry decides on whether or not it wants a fish auction, it is going to have to decide on what direction it will take with regard to rural communities in this Province that depend on the fishery. The history of fish auctions has shown that when a site has been chosen for operation, it tends to become a major port and landing site. This increase in traffic comes at the expense of communities that do not operate an auction or an auction landing site. Presently there are hundreds of ports in Newfoundland where harvesters are permitted to land their catch. If an auction was instituted, in one community, that proved to be successful, there would be a tendency for harvesters and processors to migrate there simply because it would make economic sense. This may be possible for larger companies, but can small single plant operations adapt to such a situation? In many communities, these plants are all that remains for employment. What happens to these communities? Will a fish auction encourage resettlement?

This is a very significant issue for the processors of this Province. If there were to be an accumulation of fishing industry activity in specific areas of the Province, it would greatly impact processors. First of all, those who were closest to the activity would have an immediate competitive advantage over those that are farther away. Secondly, if processors move to these new areas they may find themselves further from shipping points for exporting their processed products. This would probably mean these costs would become equal for all processors but the change may have been positive or negative depending on where the processor relocated from.

One method of encouraging more competition in a fish auction would have been to allow buyers from outside the Province to bid on fish here and truck it out to be processed. However, this is not likely to happen for a couple of reasons. First of all, there are fewer and fewer companies to let into this market. Companies in this Province have purchased many of the smaller companies that lie in neighbouring Provinces. Secondly, according to the FFAW, the quality of the product is very poor by the time it gets to its out of Province destination, especially in the case of crab, which has to be processed while it is alive. Both the representatives from the FFAW and what was formerly FANL agree that there is probably enough competition here to run an auction for most species.

4.1.4 Marketing.

Another area of concern that the Newfoundland fishing industry has to deal with is the marketing of our fish products. The 1998 task force(Vardy et al) found that due to its small size in the world market, Newfoundland has little ability to influence prices and

consequently has become a price taker. The advent of an auction system may have little ability to improve this situation; in fact according to FANL it may harm us. One major concern brought forward by FANL was the potential problems that companies may have in meeting contracts with their buyers. Many of the processors in this Province operate under what is known as Program Business. This means they sign contracts to supply a certain amount of product to buyers. This type of business is usually done at the high end of the market therefore; it usually means higher prices for these products. Some members of FANL fear that under an auction system, if they are unable to bid high enough to secure product, they may be unable to meet the conditions of their contracts. As a consequence, their reputation as a supplier is harmed in the market and they may lose their position at the high end of the market. Not only would this affect the company that cannot meet its commitments but also the Newfoundland industry may be classified as unreliable. This may have a snowball effect throughout the industry, as fewer buyers would be able to pay high prices for products.

4.1.5 Fishing Vessel Ownership.

One issue of concern raised by the FFAW is the issue of fleet separation. The evolution of the fishing industry in this Province has led to a situation of increasing dependence of harvesters on processors as a method to secure financing for their enterprises. As well, processors have helped other fishermen purchase enterprises with the agreement that the harvester would then supply all of their catch to that processor. Harvesters feel that this is causing them to lose their bargaining power and independence to the processors. This then, is another reason that harvesters would like to see all material go through an auction. If this should occur, it could mean that

a processor might send out a boat in which it has invested and acquired some management control but not receive any raw material in return. The FFAW feels that this would also discourage many buyers to from buying fishing enterprises, as it would no longer mean a sure supply of product for the processor. However, if boat owners continue to feel that they are obligated to supply fish to a processor that has helped to finance the enterprise, they may choose to continue to sell the catch directly to the buyer at whatever price is offered. Because of the complexity of the arrangements between harvesters and processors, it may not be even possible for harvesters to sell through an auction.

FANL too, had some concerns about this issue. If an auction were to be instituted, their members would like some assurance that they would receive money to recover the funds that they have invested in financing vessels and enterprises. They suggest that if the government wants a fish auction, they should cover the cost that the processors have invested in harvesters to allow the fishery to grow, since the demise of the Fisheries Loan Board.

Ideally, harvesters should be separated from processors if an auction was to take place. This would ensure that the demands of a fair auction are met. As mentioned earlier, in order for an auction to achieve a fair price, there must be symmetry of buyers. If there is a linkage between buyer and seller in an auction system, it may not operate in an effective manner.

4.1.6 Condition of Resources.

Marine resources across the world are diminishing. The East Coast of Canada has been hit especially hard, particularly the once abundant Northern Cod Stocks. This means that harvesters and processors are attempting to increase the profitability of their businesses while having less resource with which to accomplish this. Under an auction system, this may advantage the harvesters if demand should exceed supply. While a shortage of supply may hurt everyone in the long run, harvesters could benefit immediately if demand should suddenly increase, as buyers would be willing to pay more in order to secure product. An auction would be quicker to respond to changes in market conditions.

However, the lack of resource was of great concern to FANL. A fish auction could create insecurity of raw material supply for their processing plants to process. These processing plants tend to have a high operating costs and large amounts of capital tied up in the operation. The problem arises when these large plants are unable to operate consistently because they lost out on the bidding floor that morning. For plants to operate efficiently the must operate at as high a capacity as possible, if they do not do so, they lose money. If a buyer is only able to secure enough resource to operate for half a day each week, it may be difficult to operate at all. FANL feels that plants that are unionized are especially disadvantaged under a fish auction due to contracts that force them to do certain things that a non-unionized plant may not have to do. Non-unionized plants may not have to guarantee certain amount of hours for there workers in order for them to come into work or they may be able to pay for only the hours worked which unionized plants may not be able to do due to contract stipulations.

Non-unionized plants may be more flexible. Also, unionized plants tend to pay higher wages to its workers, which could put them at a disadvantage.

4.1.6.1 Production Quotas

However, the processors do have a proposed solution to under-capacity in their plants. For a number of years now they have declared the benefits of bringing in production quotas for processors. Under such a system, they could more effectively manage their operations. They could decide when to operate and they could be sure they had enough product to operate efficiently. FANL feels that this type of system would benefit the entire industry and make a fish auction unnecessary.

One problem that is made manifest in the above situation is the condition that our fish stocks are in. Every plant in this Province is operating below capacity simply because there is not enough fish stocks to provide enough quota. While there is little that can be done about this, it is the driving factor that affects every fishery decision in this Province. From FANL's point of view, there may not be enough fish to support the industry in its present size if an auction were introduced. From the FFAW's point of view, production quotas, which would solve some of the plants problems, are bad for competition. There is no solution that will not result in someone getting hurt. Yet government has to decide between auctions and production quotas.

4.1.7 Trust.

Almost everyone in this Province will agree that the relationship between harvesters and processors is guided by mistrust. This mistrust has become a part of our culture. Both sides in the fishery agree that a lack of trust has hindered the growth of the industry but they also agree that there is little that can be done. But would this type of

relationship interfere with an auction system? According to Mr. O' Rielly, if fish auctions did not increase prices paid to fishermen, the processors would certainly be accused of fixing this system as well. No matter what system is adopted here, it can only work if it is transparent. Fishermen need to be able to see that their prices are a reflection of market conditions. In this Province right now, there is a gas price regulation board. This was set up to ensure that gas prices remained stable and that they reflect true market changes. While Crab prices are monitored also during the season to adjust to changes in the world market, it is unable to take into account such things as bonuses or other perks paid out to some harvesters. It appears that the true prices that processors have the ability to pay are never uncovered. Maybe an independent board could monitor these activities to ensure that everyone gets their fair share of the pie and maybe some trust can be restored to the fishery.

According to Ray Andrews (personal contact, 2002), of Fishery Products International, a fish auction system would go a long way to improving relations between fishermen and processors because it would create openness in the fishing industry. Because FPI is a publicly traded company, it must accountable to its shareholders in how it spends it money. All the money it spends must be accounted for. It is unable to compete in under the table deals. If all buyers were bidding at an auction there would be no private deals and all industry participants could feel confident in the prices they receive. One of the big issues in the industry is the lack of openness in the industry and auctions may be able to change that.

4.2 Issues

The introduction to this paper outlined four issues that were very important with respect to operating a fish auction in this Province. From the information that was gathered with respect to auctions in Iceland and the present situation in the Newfoundland and Labrador fishery, this paper will attempt to provide direction on these issues.

4.2.1 What benefits can the fishing industry in this Province expect from an auction?

The main reason for examining the issue with respect to fish auctions in this Province arose from the increasing difficulty for harvesters and processors to obtain price settlements through collective bargaining. These disagreements delayed the start of the fishing season and caused much disruption for both sides of the disputes. The benefit of using an auction system as a price settlement mechanism is that it makes these negotiations unnecessary and can allow the fishery to begin on time. Under an auction, choices are left up to individual harvesters and processors as to the prices they are willing to accept instead of trying to identify a price that is considered fair and meets the needs of all participants in collective bargaining. The initial planning stage of an auction may require discussion between the parties involved but once the auction begins operation, market forces should allow it to govern itself and the prices paid in the fishery. Therefore, fisheries that are under the auction system should begin with little problems. This is perhaps the greatest advantage to the Newfoundland and Labrador fishery at this time.

Another expected benefit for the fishing industry would be the creation of an open atmosphere of business between buyers and sellers in this Province. One of the problems with the fishery in recent years has been the use of "bonuses" or rebates as a method of persuading harvesters to sell their catch to a processor. This has been particularly prevalent in the Snow Crab fishery and in recent years appears to have gotten out of hand. So much so that during the midway through the 2003 crab fishery, processors refused to buy crab to protest their own inability to control these rebates. The "Bonus" is extra money that is paid above the negotiated price by the processor, usually to the owner of the fishing enterprise, in order to convince that owner to sell his catch to the processor. The system operates in a manner that is similar to an auction. As mentioned earlier, the problem for processors was an inability to control these rebates. The problem for harvesters was bargaining power for these rebates was often dependent on the amount of crab they were permitted to catch. Harvesters with smaller Individual Quotas (IQ's) had less crab to offer and that often meant less rebate offered to them. Also, owners that may have received financial backing from processors for expansion of their enterprise may have signed trust agreements that forced them to sell to that buyer and reduced the bargaining power for rebates and bonuses. Still another group in the industry had problems with this system. Crewmembers often did not receive any portion of these rebates because they were usually paid directly to the owner of the enterprises at the end of the fishing season. Others did not receive a proportionate amount because they did not know how much bonus was paid.

One benefit of an auction would be the levelling of the playing field for all participants. Under an auction, vessels in similar sectors with differing amounts of

quota would have equal footing within that sector. Processors would be able to compete equally for fish instead of competing through bonuses and privileges. The whole industry would be opened up and would hopefully create an atmosphere of honest competition among all players. Any differences in prices received would be explained through quality instead of quantity. This may enhance the importance of landing quality products by harvesters in the future. It may also help to create a sense of trust between all parties in the industry and smooth relations for future cooperation on problems in other areas of the fishery.

Finally, one potential benefit could be an increase in the return on investment for those operating in the industry. Auctions operate on the premise that products of better quality should be more valuable and therefore should receive a higher price. While quality will be dealt with a little later in this chapter, it is plausible that quality will increase as buyers would want to pay more for better quality from fishermen. If buyers are getting better quality and paying more for it, they will want to ensure that the quality of the product is maintained. It makes no sense for a buyer to purchase a product of high quality and not take advantage of it to please their customers. If this holds true, the industry should see increased profitability. If auctions are successful in raising quality, there should be benefits for the industry.

4.2.2 What impact will auctions have on the quality of seafood landed and processed in this product?

As mentioned earlier, the theory behind auctions lends itself to the idea that better quality products should receive higher bids. Can then, stakeholders in the industry expect an increase in quality under an auction? First of all, in order for quality to

increase, there must be room to improve the quality and a method to do this. Looking at the fishing industry in this Province, the most obvious species with quality concerns is the Northern Shrimp. As discussed earlier, this is an industry that has received much criticism for the quality that is landed. However, how much impact can an auction have here? Most stakeholders agree that much of the problem with quality of Northern Shrimp lies in the time of the year it is harvested, and the size of boats that are harvesting it. An auction can do little to change these things in itself. While it may encourage boat owners to make improvements to their vessels that could improve quality where they can, it causes fishermen to fish at times when the natural forces do not permit. An auction may actually have a negative impact on this industry. Take for example if a storm forces fishermen to stop fishing for a week. After the storm ends, hundreds of boats leave at the same time and try to make a quick trip knowing that plants will probably be paying more for the first shrimp that gets landed. The problem arises when this enormous amount of shrimp arrives. Buyers know it will take them days to process all this shrimp so the product that comes in last will end waiting in cold storage and on trucks in the hot sun until it can be processed. All the time the quality is diminishing. The shrimp industry may be too unreliable for a auction to work well in increasing quality.

Another important fishery where quality is a concern is in Groundfish. This includes such species as Cod, Greenland Halibut, Flounder, and Redfish among others. These fisheries are another area where quality has been a concern. This paper mentioned the problems of Cod quality back in the eighties, especially in the inshore fishery. Much of these problems with quality in the Groundfish fishery were a result of fishing methods and handling practises. In particular, Gillnets had a very bad impact on

quality due to the fact that fish often died in the net and the tight mesh made the fish susceptible to bruising. Once the fish died it immediately started to decompose. This decomposition is often more advanced in areas where the water is warmer. Meanwhile, handling practises, such as washing and icing were often not seen as being as important as they really were for quality. With the downfall of the Groundfish stocks, it is imperative that quality of these fisheries be improved in order to take advantage of the limited resources that are available. An auction may represent a way to do this. Today, Longlining fishing is seen as a method of improving the quality of fish especially when compared to Gillnets. Using a Longline, usually allows the fish to remain alive longer and reduces the amount of injury to the fish. This would represent an immediate improvement in quality. If fish that are caught in this manner could be auctioned with fish that is Gillnetted, it should show which method has better quality as manifested by a better price. This should encourage other harvesters to catch their fish by the method that produces the best quality. In this situation the methods are available to the fishing sector to improve the quality of their products.

Auctions will only achieve improvements in quality where there is a means to increase quality and where there is room for quality to improve. Under such circumstances where the means may not readily exist, an auction may fail to increase quality by itself. Therefore, it is necessary to identify what is directly needed in each fishing sector to directly impact quality concerns.

4.2.3. Is there enough competition for an auction to operate effectively in this Province?

As discussed earlier, in areas where the quality of seafood is very high, such as in Iceland, auctions may not significantly impact on quality. However, auctions did impact significantly on prices in that country. This was probably due to increased competition among buyers for product to process. This raises an important question. Are there enough buyers to support competition under in auction in this Province? Again in order to examine the benefits that may be accrued through competition under an auction it is important to look at the species of fish involved. Take for example Groundfish. In 2002 there was 59880 Metric Tonnes (M.T.) landed in this Province with a landed value of $ 64,218,000. Also in 2002 there were 123 licensed Primary Groundfish plants operating in this Province that were capable of processing that Groundfish (www.gov.nf.ca/Fishaq/licensing/overview.stm May, 2004). These plants were in operation because provincial regulations state processing plants must be in operation the previous two years in order to obtain a licence. Certainly not all were processing the same species but it is safe to say there was plenty of competition in that sector. On the other hand was the shrimp industry, which landed 76462 M.T. of product but was processed in only 11 plants with a landed value of $143,820,000, certainly a smaller amount of competition for a much larger fishery. This was compounded by the fact that some buyers own multiple processing facilities. In between was the Snow Crab fishery, which landed 59422 M.T. of product to 36 processing plants with a landed value of $235,803,000 (www.gov.nf.ca/Fishaq/statistics/2002.stm May, 2004). These figures show where most of the competition lies in each sector. If an auction were started today in these industries, the effects of competition would most likely be observed in the crab

industry which appears to have high demand and a moderately high amount of competition. On the other hand there are few buyers in the shrimp industry, which is experiencing a much lower demand. The impacts of competition here may not be visible. Groundfish could benefit most from competition. It has many buyers and as mentioned earlier has the ability increase the quality in that industry. The effects on prices paid to fishermen could be substantial even though the crab industry appears to be operating in a buyers market (supply exceeds demand). It is important to note that the success of an auction is not measured by increases in prices. It is measured by the ability of the auction to adapt to changes in the market. However, if harvesters believe that a properly run auction will automatically result in higher prices, it may mean they would consider the auction a failure otherwise. There must not be any pre-conceived notions about prices if an auction is to take place.

This section began by asking if there is enough competition to operate an auction in this Province. Certainly in the Crab and Groundfish sectors there is plenty of competition. The Northern Shrimp industry has a very weak level of competition. Certainly, competition is a major factor in the ability of auctions to truly reflect market conditions. Therefore any auction system should be introduced in either the Snow Crab or Groundfish sector.

4.2.4 What challenges face an auction system as a form of price determination in this Province?

As with any change in the way business is done, some challenges may arise and some costs may be incurred with an auction system. Probably the biggest hindrance is the fact that some buyers and sellers may suffer under an auction. Some harvesters will

find it difficult to compete because of small, aging vessels. They are unable to equip their enterprises with the materials necessary to take advantage of prices offered for better quality. This could be particularly hard for shrimp fishermen. If prices paid for the highest quality shrimp are significantly higher than those paid for poorer quality, some fishing enterprises may find it difficult to survive, particularly those who do not have a Snow Crab licence.

Likewise some buyers could be hurt under an auction. This could include companies that have difficulty running efficiently and are not able to bid for the better quality products. It could be said that these fishing enterprises and processors have no place in the industry if they cannot compete but one must also realize that these companies provide jobs in a employment challenged Province. The industry may be better off but is the Province?

This coincides with situations that evolved in other countries where auctions have become a hub for activity, leaving voids in other areas. This is usually a problem in areas where display auctions are used but can also be a problem if hail at sea auctions are used. Ports that are nearest the fishing grounds will probably be used more frequently under an auction which may lead companies to move to these areas in order to gain an advantage over other companies. As mentioned earlier, having auctions and processing facilities in close proximity helped to improve quality. It was easier and quicker to transport fish and thereby it would be fresher upon processing. There were logical reasons for the relocation of activity. The government could try to prevent this by allowing the buyer to decide where the catch will be landed. There would be no auction "site" as such but a central command that would receive bids

from buyers with conditions of sale. This may mean a certain price if the product is landed at a certain port. There would be no movement of resources from existing sites and landing would operate in much the same manner as before. However, if the government would like to see an accumulation of activity in certain areas of the Province, maybe an auction could help to achieve such a plan. It is important for those involved in the industry to decide what is most important and then determine the appropriate steps to achieve such results.

Another concern is the processor-financed enterprises that now exist in the industry. The earlier discussion showed the amount of displeasure that was expressed by processors over this topic. This could be a significant obstacle to overcome especially if legal agreements exist between harvesters and processors. However, under an auction, a processor would be forced to bid on a catch that he may feel rightfully belongs to him since he helped to finance the catch. Therefore it may be difficult to persuade these processors to support the auction initially unless they are somehow relieved of their financial obligations to harvesters. Secondly, harvesters who have a long-standing relationship with one buyer who has supported them with financial help in the past may feel a sense of loyalty to that buyer and may not want to auction their catch to someone else. Finally, because there are a large number of buyers who have financed enterprises, they may decide not to bid too high on a catch that has been landed by a boat "belonging" to another processor. These reasons do not mean that an auction would not work, because there are some independent harvesters and processors out there. But, if everyone was independent, many of these circumstances could be dealt with and participants could put more confidence in the auction.

The potential for some harvesters to be hurt under an auction and the present financing situation between harvesters and processors have caused many to wonder if a minimum price should also be negotiated. For those harvesters who are tied to processors through loans, they may need some sort of safety net to support them in getting a fair price from a processor. On the other hand some harvesters may chose to negotiate a price among processors for themselves, judging by what happens on the auction sales. One problem with setting a minimum price is it will allow those harvesters who refuse to land good quality to continue to do so. If the purpose of the auction is to improve quality, it should be set up in such a way as to ensure that poor quality is not rewarded. Another reason that a minimum price may be unnecessary is because no one can be forced to buy a product that does not meet a minimum standard. If a harvester lands some fish that is spoiled, obviously no buyer would want to buy it. If it has no value the harvester should not be compensated. If a harvester lands a catch that has a low value because of its size, and an auction produces a price that is lower than a minimum price that was set, buyers should not be forced to pay a price that is higher than they feel the catch is worth and potentially, take a loss. Minimum prices do not benefit the industry as a whole and have no part in an auction.

Another challenge that faces the industry under an auction is how to deal with determining Quality and handling disputes about such. If higher quality is worth more, there has to be a method of determining that level of quality. If one lot of fish receives more than another lot, there has to be an explanation for that difference. In the shrimp industry today, freshness is measured by only one method, scent. If a load of shrimp has the scent of ammonia, it can be turned down as being spoiled.

However, the test for this smell consists of the ability of a grader to detect that smell which is very subjective. In Iceland, a system has been developed that looks at multiple physical attributes in determining the quality of a product. This system is known as the Quality Index Method (QIM) (www.qim-eurofish.com, 2003). Under it various attributes of the fish are examined and given points based on quality. These points are then entered into a formula that gives a calibration of the quality of the fish. It is very objective and very reliable. These types of systems are needed here to prove to both buyer and seller the quality of the harvest. An objective quality grading system also helps to build a sense of openness in the industry. By having fish grading harvesters can be assured that the price they pay is purely based on the quality of the product they land and not on any other factor. . A grading system can identify where the problems with quality lie and thereby help to advance the industry by making improvements in these areas.

Any Grading System that is used must be implemented at the dockside when fish is landed. It is important to have an official grade administered as soon as possible in order to avoid disputes. Any changes that need to be made to the price that was agreed upon when the catch was hailed in can then be made. Once again, if the grading is done at the dockside, it adds to the sense of openness needed in the industry. Any disputes would then be handled by the auction company, which, would have the final say. Therefore it is important that the auction company be independent. Also both buyers and sellers should be made familiar with the methods used in grading the catch.

Finally the industry has to decide if it wants all catch to go through the auction. This issue raised a significant amount of opposing views between the union representing fish harvesters and the representatives of the fish processors. On one hand, the Fisheries, Food, And Allied Workers (FFAW) union were adamant that all fish must go through the auction while the Fisheries Association of Newfoundland and Labrador preferred to allow individuals to choose if they wanted to sell through the auction. First of all, this issue has become clouded by the amount of money invested into harvesting enterprises lately by processors. It is difficult to determine how these arrangements may affect the selling of fish through auctions. Processors are unlikely to support any arrangement that forces them to bid on load of fish that they helped to finance. This is a weak position for processors to take. It is in the best interest for everyone in the industry for quality and prices to improve. If an auction can achieve this, processors stand to benefit substantially more than simply by trying to maintain a network of harvesters that sell to them. They have to remember that their profits come from the companies that buy their products on a world market. These products compete with quality products form around the world. If forcing everything through an auction can help to weed out bad quality, it should be done. But perhaps the greatest benefit of having all fish go through an auction is levelling of the playing field for all participants. Under an auction, smaller vessels with less quota would have equal footing with larger vessels with larger quotas. Processors would be able to compete equally for fish instead of competing through bonuses and privileges. The whole industry would be opened up and would hopefully create an atmosphere of honest competition among all players. Any differences in prices received would be explained through quality instead of quantity.

5.0 Recommendations.

The following recommendations are made concerning the establishment of an operating fish auction in the Province of Newfoundland and Labrador.

5.1 Recommendations prior to an operating auction.

1. The provincial government, as well as representatives from the processing and fishing industries should set up a standing committee to gather information and to oversee price settlement mechanisms in this Province. The purpose behind this panel would be to foster cooperation and dialogue amongst participants in the fishing industry. The present situation consists of tense negotiations between representatives of FFAW and processors. The members of such a panel would be made up of industry representatives that have had little influence in the past and can bring new ideas and new relationships to the table.
2. The provincial government will immediately undertake a study to how a potential change in price determination would impact communities that rely on the fishery in this Province. Auctions could mean a new landing schedule which. could negatively impact some communities that rely on boats landing in their ports.
3. The provincial government should introduce programs and incentives for those persons interested in establishing a fish auction in this Province.
4. Processors should study the issue of fish auctions and pricing to determine how auctions can be used to benefit their companies.
5. Harvesters should also study the pricing system and fish auctions in order to determine how auctions can be used to benefit their enterprises.

6. A cooperative pilot project should be started that could evaluate the difference in value between high quality landings and those that are lower quality. This would involve intentionally harvesting high and low quality products. This is important in order to understand how much the fishing industry suffers from poor quality. This could provide empirical data rather than hearsay as to how poor quality impacts prices. This is very important to harvesters as they might see how improving quality could benefit their enterprises.
7. Processors and harvesters should work together to devise a specific set of quality standards for the fishing industry. These standards would precisely define quality standards and the equivalent prices. This would avoid confusion as to why one harvester receives more than another for his/her catch. A system similar to the Qim-Eurofish method could be used as a model.
8. The Province should immediately reinstate the Fisheries Loan Board in order to provide harvesters with a method of securing unbiased financing and free processors from debt. In lieu of a Loan Board, funds should be made available by either government, industry, banking institutions or a combination of the above, that would underwrite the costs for harvesters that are unable to provide high quality fish due to vessels that are not prepared for such activities, i.e. insulated fish holds, reconfigured fish holds to carry insulated boxes.
9. A hail at sea auction should be instituted because it would be simple to use and would be cheaper to operate.
10. The industry must identify the specific species that suffer from poor quality and identify means to improve that quality.

11. All fish should go through the auction. This will provide a transparency to the industry, which it is lacking now. Until changes can be made to how fishing enterprise financing now occurs, all species should go through an auction.
12. A minimum price should not be used for any species where an auction is operating.
13. The auction should be mandatory by sector. For example, all crab caught in the thirty-five to sixty-five foot class of vessels should go through an auction.

5.2 Recommendations for an operating auction

14. The auction should be run by an independent company without ties to the harvesting or processing sectors.
15. In the event that an auction was operating, the provincial government should establish a market evaluation position within the Department of Fisheries and Aquaculture that would track pricing in the industry to determine if a fish auction is providing a benefit to the industry. This should be the responsibility of the government to show impartiality.
16. Quality reports should be issued on a particular schedule in order to inform participants in the industry as to how it is reacting to the auction system.
17. In lieu of operating fish auction, processors should offer small incentives to vessels whose harvest represents a high quality product. This type of program would allow fishers to see the benefits of landing a high quality product and may ease the introduction of an auction.
18. The provincial government should encourage other smaller buyers to explore the options that a fish auction might present to them. Perhaps a small buyer

may be able to develop a niche market and only buy enough product to supply that market.

6.0 Conclusion

The purpose of this paper was to explore the potential ability of operating a fish auction in this Province as an alternative method of price determination in the fishery, and to provide recommendations based on this information. The analysis of the information gathered shows that while there may be some potential drawbacks and harmful effects to operating an auction, there are many reasons to support such an endeavour. This research attempted to uncover the potential benefits operating a fish auction in this Province. The research shows several potential benefits for the fishing industry. First of all it should create a more transparent method of price determination in the fishing industry. This situation could lead to less disruptions in the fishing industry due to price disputes. Another potential benefit could be increased prices and better quality. An auction could provide a means of improving quality if vessels that land better quality are paid for doing such. As other harvesters see the financial benefits of improving quality, they will in turn take steps to improve the quality of their catch. While this may be attainable through other systems such as incentives, auctions provide the transparency that other systems, such as price incentives, lack.

This leads to the second question this paper posed. How will auctions impact quality? An auction in itself cannot change the quality of the fish being landed. It can facilitate change by providing evidence that higher quality is worth more to the buyers. Quality can only be improved where there is room to improve and where this is a means to improve poor quality. An auction should highlight the species in the Newfoundland and Labrador fishery that suffer the most from poor quality. It is then up to harvesters and buyers to find a means to improve this quality.

The third question that was posed tries to identify if there is enough competition to run an auction here. The answer here depends on the species. Certainly Groundfish and Snow Crab could provide plenty of competition while Northern Shrimp may not be competitive enough.

Finally, what are the challenges, which would be encountered in establishing an auction in this Province? First of all, there is potential for a change in the way business is done in this industry under an auction. This change will affect both buyers and sellers. There is potential for some harvesters and processors to find it very difficult to compete under an auction. This could lead to some potential loss of jobs for those fish enterprises that do not adapt to a changing market. The same is also true for some processors. Another problem that has to be examined is the financing arrangements between processors and harvesters. This is a very serious challenge and should be eliminated before an auction is in place as financial agreements may undermine the operation of an auction. The industry must also decide if a minimum price would still be set under an auction. While this may protect some harvesters who are unable to adapt to an auction, it does not serve to benefit the industry as it serves to potentially reward poor quality. The industry also has to come up with a grading system that would work under an auction. This is necessary to aid in the transparency of an auction. Harvesters need to be provided with empirical evidence that shows why one catch is of better quality than another.

Finally, will all catch go through an auction? The research from Iceland shows that it may not be necessary for all catch to go through an auction. The results from that country show that auctions work well without forcing all sales to go through an

auction. However, this is not recommended for this Province. There are two reasons for this. First of all, it will improve the transparency of the auction. Secondly, it will aid in showing the best means for improving quality as harvesters have different methods of catching and storing their catch. Evidence should be gathered that will show the best methods for providing good quality. However, a voluntary auction may decrease the amount of transparency in the industry. If any harvester or processor is not in favour of an auction, it may be possible to manipulate prices that are outside the auction. One issue that keeps rising in this research is transparency, and it the industry wants to progress, it should take the steps that will provide the most transparency. However, the government should not force all species to go through an auction immediately.

If an auction is to be instituted, there are several issues that the government must keep in mind. This study found that openness was a major benefit to the use of an auction, therefore, the government must make sure this is a top priority in a functioning auction. One way to do this is to have the auction operated by an independent company. Having operators that have close ties to particular segments of the industry, such as harvesting or processing weakens the ability of the auction to operate in an open manner. Any disagreements in price may be seen as being influenced by other factors such as collusion rather than quality and market conditions. Another issue here deals with processor financing of harvesting enterprises. It is unclear if such an issue will have any effect on an auction but both sides of the issue have concerns. Various agreements between processors and harvesters may come into play under an auction. A voluntary auction may allow the existence of such agreements to continue but is difficult to judge how it will impact participants in the industry. One thing that

can be stated is that many harvesters do not like these agreements now and would prefer a system that allowed them to sell to whomever they chose. A voluntary auction may prevent this from happening.

The government must also decide which species will present the best opportunity for an auction to succeed as a form of price determination. If an auction does not succeed, there are few alternatives for other methods of price determination. Therefore the government must choose a species that will show the most potential to work. This will probably be either Snow Crab or a Groundfish species such as Turbot from the Northeast Coast of Newfoundland and Labrador or Cod from the South Coast of Newfoundland. Both offer plenty of competition as well as a means to improve quality, especially Groundfish species. These fisheries represent a significant portion of the fishery in this Province and could go a long way in proving the ability of an auction to work.

One final issue that came up during this research was the issue of minimum price setting under an auction. Would a minimum price be necessary under an auction? The problem with a minimum price under an auction system is that it has the potential to undermine the ability of an auction to encourage participants to increase quality. A minimum price may simply provide an outlet for poor quality. While it may allow those that are incapable of producing high quality to remain in the industry, it may cause the industry to continue to produce inconsistent quality on the world market. However, under a voluntary auction, minimum prices may still be set, especially if processor financing still exists. This will ensure that harvesters who have agreed to sell product to processors in exchange for processor financing will receive a fair price.

However, this calls for a major change in the way business is done in the fishing industry today. Such changes must be well thought out so as to avoid as many problems in the future. This is not a system that should be rushed. Also, all parties must be willing to cooperate, should problems arise. This is not something that should be abandoned if difficulties arise. Based on the information given, the provincial government should begin plans, in cooperation with industry representatives, to inaugurate a fish auction sometime in the near future.

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