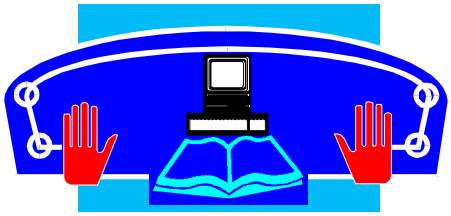

A Study Of The Effect Of The Pricing Policies Of The Ffmc Upon The Southern Nwt Fishery, And Requirements For Government

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CHAPTER 1

OVERVIEW, CONCLUSIONS, RECOMMENDATIONS

A. OVERVIEW AND CONCLUSIONS

In this report, we analyze and discuss the effect of the F. F.M.C.'s pooling and pricing policies upon the Southern N.W. T. fishery. We define the Southern N.W.T. fishery to include Great Slave Lake, and the inland lakes from which catch is delivered to the Hay River Fish Plant. The study is predicated upon the assumption that the N.W.T. fishery will remain under the jurisdiction of the F. F.M.C. Consideration of the potential for the fishery if it were to withdraw from the F .F .M. C., or if extreme. changes were implemented that would constitute a de facto withdrawal, are beyond the scope of this study.

The study includes the following:

1. Projection of the requirements for price support from the Government of the N.W.T. under the assumption of a fishery operating under the F. F.M.C. jurisdiction and utilizing a system of species pooling.
2. Examination of the effect of F. F.M.C. pooling and pricing policies on the Southern N.W.T. fishery. The examination includes an analysis of actual results for the year ended April 30, 1981 under the alternate conditions of "species pooling", "provincial species pooling" and the guarantee

agreement for that year. We also consider the theoretical and practical basis for pooling systems, and the potential effect the system could have on the Southern N.W. T. fishery for the future.

3. Examination of the basis for government support of the fishery. '
4. Examination of the winter subsidy of summer fish prices resulting from F. F.M.C. pricing policies, and its effect upon the fishermen' s motivations
5. Examination of fishermen's incomes for the winter of 1980 - 81, summer 1981, and a four year trend analysis for selected fishermen.

Based on the analysis included in the text of this report we derive the following conclusions:

1. Re projections of future equirements for government support

   Unless major changes are introduced, the Southern N.W.T. fishery will be facing hard times over the next 3 to 5 years. The extent will depend upon the F. F.M. C. ability to solve its whitefish problem, changes to the pooling systems, and general economic conditions.

   Under the assumption included in this text, we project the following levels of subsidies that would be required to result in fishermen's prices increasing (after 1983) by 10 percent per year :

YEAR	AMOUNT
1983	$300,000
1984	$550,000 /
1985	$890,000

2. Re the effect of F.F.M.C. pooling and pricing policies on the Southern N.W.T. fishery

a. On a historical basis two forms of pooling have been employed by the F.F.M.C. The first, species pooling, identifies revenues from the sale of products by species catagory. The costs incurred to gather, pack, transport, precess, store, and sell are charged to the species pool. The residual balance is "paid to the fishermen as an initial and final payment. Under a second alternative, provincial species pooling, the revenues and costs are further sub-divided by the provinces of origin of the catch.

b. Under the conditions of provincial species pooling for 1981, the returns to the N.W.T. would have been approximately $169,000 greater than they were under the terms of the guarantee agreement. Had the N. W. T. operated as a provincial pool for 1981, the total of the price support paid by the Government of the N.W. T. ($153,000) would not have been required. Furthermore the f ishermen would have received an additional $16,000 for their catch. Considering this in light of our analysis of fishermen s operating incomes, we can state that under the conditions of a provincial species pool, for 1981 the fishery was self-sufficient.

c. The higher 1981 provincial pool resulted from a number of factors (listed in text). A major factor was the higher average selling price for Great Slave Lake fresh whitefish (1981 - $104,000; 1980- $165, 000) as apposed to whitefish from all other lakes. Our analysis indicates that the major factor creating the higher price for Great Slave Lake fresh whitefish is that of timing. The Great Slave Lake whitefish sell on a prim winter market. Our analysis does not

indicate positively whether there is or is not a degree of buyer preference for the Great Slave Lake whitefish.

There appears to be a trend towards a lower proportion of Great Slave Lake winter catch selling in the fresh fish market. This is at least partially the result of increasing winter whitefish catch from all other areas.

d. Based on our analysis of both the practical and theoretical aspects of pooling systems, we determine that for the long-term the species pooling system should be more beneficial to the N.W.T. Our conclusions result from the following:

i. As stated above, the N.W. T. for the year ended April 30, 1981 would have faired better under a provincial species pool. This may be the case for the years ended April 30, 1979, 1980, and 1982. However, for the years ended April 30, 1977 and 1978, the returns to the N.W.T. were less under the. conditions of provincial species pooling. The factors that were most responsible for the change included the improved position of frozen dressed whitefish as a result of a 1978 sale of whitefish inventories to Poland, and a change to producing more profitable products at the Hay River Fish Plant at least partially-as a result of our 1979 study ("The Hay River Fish Plant, Alternative Production Plans") . However, we now believe that the cycle may turn in favour of species poling. Our opinion is the result of the deteriorating position of frozen dressed whitefish, and our concern that the F.F.M. C. may in the future utilize the Hay River Plant more for the production of the less prof i-table frozen products.

ii. Under asystemof provincial species poling, the N.W.T. fishery could receive lower returns as a result of discrimination by the management and Board of Directors of the F.F.M. C. in relation to production planning and sales effort.

iii. Under a system whereby the N.W.T. was a provincial species pool, and the balance of the F.F.M.C. was a species pool, the N.W.T. would be required to compete with the other provinces for the right to produce the most profitable products. Based on our observation since 1973, we do not believe that the N.W.T. could be so well informed, and have sufficient influence, to be successful in this competition (examples in subsequent chapters) .

iv. We are of the opinion that the competition between the provinces for the right to produce the most profitable product would create inefficiencies that would result in lower returns for the total fishery. Ultimately this would have to result in lower returns to the N.W.T. fishermen.

d. From our examination of the actual pools for the year ended April 30, 1981, we discovered a number of factors that, if adjusted, could result in greater returns to the N.W.T. fishery under a species pooling system. We conclude that further analysis is required.

e. For the year ended April 30, 1981 on a provincial species pooling basis for the N. W. T., the winter fishery subsidized the Sumner fishery to the extent of between $. 10/lb. and $. 20/lb. The subsidy results from winter premiurns not matching the increased net returns resulting from selling fresh fish at prime prices. Eased on interviews with fishermen, we conclude that 'this hidden subsidy has a significant effect upon motivating fishermen to fish the summer

season as apposed to the winter season. We conclude that higher winter premiums resulting in increased winter catch could result in increasing the overall profitability of the fishery. Furthermore, the payment of higher winter premiums under a system of, species pooling, should also have the effect of reducing the discrepancy for the N.W.T. between the returns under species pooling and the returns under provincial species pooling.

3. Government of the N.W.T. price support program

The N.W.T. price support program has been successful, but has some deficiencies that could be corrected. The success of the program can be measured by the fact that the fishing industry is currently contributing in excess of $2,200,000 annually to the economy of the N.W.T., whereas the support payments have varied between $40,000 and $155,000 per annum. The program was also directly responsible for maintaining the fishing of inconnu to the point where the species was ' self-sufficient. The deficiencies *resulting* from the program include it 's almost exclusive support of the summer fishery as apposed to the more profitable winter fishery, and the adversary relationship that has been established between the Government of the N. W. T., the F .F.M. C., and the N.W.T. fishermen.

We do not approve of a program that perpetuates itself. However, a solid basis for a program should be established and documented, so that it can be utilized when required. We recommend the following principles for a support program:

a. The support program should be in support of f ishermen 's prices, not operating costs. An exception could be made' for a program of freighting subsidies provided that the program was subject to J

periodic review to ensure that it was assisting in the objective of maximizing fishermen's net incomes.

b. The program would be in support of a system of species pooling. However, the system should be monitored on a regular basis (possibly every second year) to ensure that the returns to the N.W.T. from a species pool were not sigificantly lower than they would be under the conditions of a provincial pool. If monitoring determined that this was the case, there would be no adjustment to the current year, but rather adjustments would be negotiated for future years.

C. The program should support practices that will result in the fishery maximizing its economic returns. For example, the program should support winter fishing as long as increased winter volumes will increase the profitability of the fishery.

d. On an annual basis, the F. F.M. C. would be required to submit a request for support by April 1, and the program should be finalized prior to the approval of fish prices by the F. F.M.C.'s Board of Directors.

e. The program should contain an audit provision

4. Fishermen'S incomes

Fishermen's net incomes are declining. The subsidized prices paid for the summer of 1981, were just adequate to allow a reasonably efficient fisherman to meet his operating costs, finance his capital expenditures, and receive a small return for his efforts. "We conclude that fish prices cannot be lowered without a risk of a migration of fishermen from the fishery. We are also of the opinion that a reduction in the volume of an individuals catch as the result of production quotas would have the same ef feet.

5. May River Plant Operating rests

Examination of operating efficiencies of the Hay River plant, H. Broadhead, and the lake stations is beyond the scope of this study. We do note that utility costs, specifically power costs, have increased significantly over the previous two years, and are likely to continue to increase at significant rates in the future. We conclude that further analysis is required.

In summary, although the Southern N.W.T. fishery attained in 1981, a theoretical position of self-sufficiency, the prospects for the future are not good. Increased returns to the N.W. T. can be generated by altering the pooling and pricing systems. However, we are of the opinion that long-term improvements will only be obtained when the "whitefish problem" is, solved. As long as the total F .F.M. C. fishery delivers more whitefish than can be readily sold, then there will be a problem on Great Slave Lake.

B. RECOMMENDATIONS

The recommendations listed below are predicated upon the N.W. T. fishery remaining under the jurisdiction of the F .F .M. C. From our analysis and conclusions outlined in the body of this report we recommend the following:

1. The Government of the N.W. T. should formulate basic principles for a program in support of the fishery. The program should be designed to provide support when needed, but not so as to perpetuate itself. The principles listed in this report should be considered for the program..
2. Further analysis should be performed to determine adjustments that should be mad to the species pooling system to generate greater returns to the N.W. T. fishery.

CHAPTER II

COMPARISON OF NET RETURNS TO THE N.W. T. FOR THE YEAR ENDED APRIL 30, 1981, UNDER THE CONDITIONS OF THE 1980 - 81 GUARANTEE AGREEMENT, SPECIES POOLING, AND REGIONAL SPECIES POOLING

A. OVERVIEW

The area of F.F.M. C. pooling and prices, especially as it effects the N.W.T. has been very confused. In chapter V, we discuss the theory of pooling alternatives. In this chapter we calculate pools for the year ended April 30, 1981 for the N.W. T. , under the condition of regional species pooling, and species pooling, and compare these pools with a calculated pool under the terms of the guarantee agreement for that year. We should emphasize, that we did not audit the pools, but rather utilized data obtained from the F. F.M.C. to calculate pools under alternate conditions.

We calculate that for the year ended April 30, 1981, a regional pool for catch included in the F. F.M. C. calculation of the 1981 guarantee agreement, would generate a return to the N.W. T. fishermen of $169,000 more than under the terms of the guarantee agreement. For that year, the government of the N.W. T. paid a subsidy of $153,000. Had the agreement specified the conditions of regional pooling as calculated by ourselves, no payment would have been required, and the fishermen would have received an additional $16,000. Effectively, if the N.W. T. fishery for that year had received the returns from the product that it

produced, then it would have been self-sufficient.

We have not calculated provincial pools for any year other than the year ended April 30, 1981. However, we believe that for the years ended April 30, 1978, 1979, and 1982, the differential between the pools calculated on a provincial basis, and the pools calculated under the terms of the guarantee agreement, would be as great or greater than for 1981. Assuming that we are correct, and provided that one is prepared to accept the concept of provincial pooling, then it can be stated that the subsidies from the Government of the N.W. T. to the fishery are supporting the fishery of other provinces, rather than the N.W.T. fishery. we may be examining a viable fishery that is dicing because of the system. For this reason we are strongly recommending that the analysis included in this chapter be extended to the years listed above.

B. POOLS AS CALCULATED BY THE F. F.M.C. UNDER THE TERMS OF THEIR AGREEMENT WITH THE GOVERNMENT OF THE N.W.T. FOR THE YEAR ENDED APRIL 30, 1981 AS COMPARED TO A SPECIES POOL FOR THE SAME YEAR

In table 1 we compare the F. F.M. C. calculation of a N.W. T. pool, with a pool calculated by ourselves under the conditions of "species pooling". The reader will note that in dollar terms there is no real difference between the two. Both methods result in a negative pool of approximately $90,000 ($57,000 when holdbacks on pickerel are considered) . .

To make the comparison meaningful, we have accepted the methodology used in the F. F.M. C. calculation. However, we should note that one Alberta lake (Bitcho Lake) is included in the F. F.M.C. calculation. The effect of including Bitcho Lake is to increase the pool by approximately $81000•

TABLE 1

RJKONCILIATION OF "STRICT SPECIES POOL" WITH POOL CALCULATED BY F. F.M. C. IN ACCORDANCE WITH TERMS OF PRICE SUPPORT AGREEMENT

YEAR ENDED APRIL 30, 1981

(nearest 1,000 lbs., $1,000)

Species	Summer	Winter	Total	------Final Payme ------	
	---- (lbs. delivered weight)---			$/lbs.	$
Whitefish smoker	194.0	49.3	243.3		
Whitefish export	1390.1	686.7	2076.8	.039	81.0
Pickerel					
Round	10.0	18.2	28.2	.262	7.4
Dressed		.7	.7	.306	.2
Headless	66.5	5.4	71.9	.380	27.3
Northern pike					
Dressed	58.1	58.7	116.8	.09	10.5
Headless	123.7	62.6	186.3	.09	16.8
Lake trout					
Dressed	170.4	7.9	178.3	.019	3.4
Headless	28.7	3.0	31.7	.019	.6
Inconnue	75.9	34.0	109.9	.264	29.0
Total	2117.4	926.5	3043.9		176.2

Deduct : costs paid by F. F.M. C. at Hay River normally charged to fishermen under "species pooling":			
Fresh fish backoff is excess of combination fresh/frozen backoff		64.5	
H. Broadhead loss		119.0	
Overpayment on whitefish		83.0	(266.5)
Total species pooling deficiency ,			(90.3)
Total deficiency under term of agreement .			(91.6)
Difference in favour of species pool			1.3

C. PROVINCIAL SPECIES POOL FOR THE YEAR ENDED APRIL 30, 1981

In table 2, we present our calculation of a provincial species pool (for the southern N.W.T.) for the year ended April 30, 1981. In table 3, we compare the net available for final payment per the provincial species pool with the net available for final payment under the terms of the price support agreement. The reader should note that the net available for final payments under the provincial pool is $112,000, or $169,000 greater than the net available under the terms of the price support agreement.

For the year ended April 30, 1981, (the last complete pooling year) the Government of the N.W.T. paid to the F. F.M.C. $153,000 in price support. Had the agreement been for a provincial species pool, no price support would have keen required. Furthermore, the fishermen of the N.W.T. would have received an additional $16,000. Effectively, if one accepted the concept of a provincial species pool, it could be said that the price support paid by the Government of the N.W.T. flowed to fishermen of other provinces (mostly Manitoba and Saskatchewan). We should specify at this point that we are not in favour of the concept of provincial species pooling for the reasons discussed in chapter lV.

Pickerel	Trout	Northern Pike	Inconnu	In Transit	Total
79	209	297	109		2934
10	78	97	4		663
69	131	200	105		2271
$202	$1.49	$189	$92		$2302
23	9	9	7		236
	(1)	-			(9)
(1)	(2)	(3)			(39)
(1)	(2)	(1)	(2)		(17)
(4)	(4)	(4)	(1)		(25)
219	149	190	96		2448
					42
					2490
					67
					44
					168
					(48)
					231
					9
					(7)
					28
					30
(15)	(64)	(53)		(29)	1414
(44)					(505)
					(44)
					865
					169
					63
					401
					105
					179
					99
					(1)
					119
					11.34
					(12)
					1122
9 ′		J.2	3		116
					126
					-14-
					.$ 112

TABLE 3

RECONCILIATION OF SOUTHERN N.W. T. PROVINCIAL POOL

WITH POOL CALCULATED IN ACCORDANCE WITH THE TERMS OF

PRICE SUPPORT AGREEMENT BETWEEN F. F.M. C. AND THE

GOVERNMENT OF N.W.T.

YEAR ENDED APRIL 30. 1981

(nearest $1,000)

Net available for final payments per regional pool calculation (Table 2)	$112
Net available (deficiency) for final payments per agreement before payment of pickerel holdback	(92)
Add holdback on pickerel:	
Round	8
Dressed	
Headless ,	'27
	35
Net available (deficiency) for final payments per agreement	(57)
Excess of regional pool over pool calculated under terms of the agreement	$169

STATEMENT OF MAJOR PRINCIPLES SUPPORTING THE CALCULATION OF THE N.W.T. PROVINCIAL POOL

1. Sales of N.W.T. product have been identified on a specific basis to the extent that they were reported on F.F.M.C. sales analysis.

2. Inventory has been identified on a specific basis to the extent that it is identified on the F.F.M.C. inventory records.

3. Production has been identified on a specific basis to the extent that it is identified on F.F.M.C. production records.

4. Sales, inventories, and production that could not be specifically identified are treated on the same basis as all other products.

5. Actual N.W.T. costs, less an allowance for Alberta production, are charged to the pool.

6. Other costs are allocated to the pools on a basis that we consider to be most correct. Because of our experience we can be considered experts in this area.

D. FACTORS CONTRIBUTING TO THE DIFFERENCE BETWEEN THE NET RETURNS AVAILABLE UNDER A PROVINCIAL POOL AS APPOSED TO UNDER THE POOL CALCULATED IN ACCORDANCE WITH THE 1981 PRICE SUPPORT AGREEMENT

The calculation of a provincial species pool by itself was a very large assignment. The fee structure for this assignment was just not adequate for us to examine all of the factors that created the difference between the provincial species pool and the pool calculated under the term of the agreement. However, there are a few factors that were recognizable upon scrutiny. These include:

1. The higher fresh selling price of Great Slave Lake whitefish as apposed to whitefish from other areas;
2. The more profitable product mix produced from N.W. T. catch as compared to catch from other provinces;
3. Overages on catch purchased;
4. Comparative sales of Great Slave Lake whitefish smokers as apposed to Lake Winnipeg whitefish smokers;
5. Charges to N.W.T. fish for the costs of operating certain processing and packing facilities located in other provinces;

1. FRESH WHITEFISH SALES

On an average, sales of fresh Great Slave Lake whitefish bring a significantly higher return than the sales of fresh export and sinker whitefish from other provinces. In table 4 attached, we present a comparison of fresh Great Slave Lake whitefish sales to the fresh sales from other F. F.M.C. lakes. In total the differential in favour of Great

Great Slave Lake

Small			Medium			Large			Jumbo			All sizes		
lb.	$/lb.	$	lb.	$/lb.	$	lb.	$/lb*	$	lb.	$/lb.	$	lb.	$/lb.	$
24	1.29	31	185	1.38	256	15	1.60	24	1	2.00	2	225	1.39	313
11	1.00	.11	350	1.26	440	23	1.57	36	1	1.58	2	385	1.27	489
27	1.07	29	465	1.31	608	35	1.43	50	5	1.60	8	532	1.31.	695

Slave Lake whitefish is as listed below:

Year	Specific fresh sales of G.S. L. whitefish	Differential in average selling price between fresh sales of G.S.L. whitefish and whitefish from all other lakes	
	lbs .	$/lb.	$
1982 (to February)	225,000	.40	90,000
1981	385,000	.27	104,000
1980	532,000	.31	165,000
1979			

Obviously this factor would be a significant contributor to the higher provincial pool.

Why does Great Slave Lake whitefish sell at a higher price than whitefish" fran other lakes? There is no question that the most significant factor results from a timing difference. Essentially, since 1977 the Great Slave Lake production has been frozen or processed during the summer season, and delivered fresh to Edmonton or Winnipeg during the winter season. For the reasons of greater demand (partly ethnic demand as a result of holidays) , and lower supplies, the winter fresh whitefish sales demands a much greater price than summer fresh whitefish sales.

There is also a question as to whether or not the Great Slave Lake , whitefish remands buyer preference that results in a higher price. The F. F.M.C. states that this is not the case. To shed further light on this matter we have prepared table 5. In the table, for 1980 - 81 and 1981- 82, we compare on a monthly basis the sales of fresh medium

TABLE 5

COMPARISON OF FRESH SALES OF GREAT SLAVE LAKE MEDIUM DRESSED WHITEFISH VERSUS EXPORT MEDIUM DRESSED FROM ALL OTHER LAKES ON MONTHLY BASIS FOR WINTER 1980 - 81; 1981- 82

(nearest 1,000 lbs, $1,000)

	Great Slave Lake			other Lakes		
	Lbs.	$/lbs.	$	Lbs.	$/lbs.	$
December 1980	37.1	1.18	43.8	142.8	1.11	158.7
January 1982	81.4	1.50	122.4	162.8	1.54	251.2
February 1982	38.3	1.64	62.7	93.0	1.57	145.6
March 1982	30.2	1.29	39.1	169.5	1.19	202.1
April 1982						
	187.1	1.43	268.0	568.1	1.33	,757.6
May-November 1981	*27.8	.99	27.4	*713 .5	.72	511.4
	214.9	1.37	295.4	1,281.6	1.20	1,269.0
December 1980	21.4	.78	16.7	155.1	.75	116.9
January 1980	61.5	1.39	85.5	147.2	1.38	203.1
February 1980	39.0	1.34	52.2	78.0	1.24	96.4
March 1980	117.9	1.32	155.3	151.3	1.32	200.1
April 1980	111.2	1.17	130.5	52.2	1.38	72.0
	351.0	1.25	440.2	583.8	1.18	688.5
May-November 1980				*1, 048.9	.74	780.6
	351.0	1.25	440.2	1,632.7	.90	1,469.1

* Does not include sales of fresh sinker whitefish

dressed Great Slave Lake whitefish, with the sales of fresh medium dressed export whitefish from all other lakes. Certainly this table supports the timing factor explanation. However, based only upon the analysis of data included in table 5, we could not conclude that the G. S .L. . whitefish has specific buyer preference. Although on an average the winter selling price of the G.S.L. whitefish is higher (1981-82 - $.10/lb., 1980-81- $.07/lb.), there are months in which the average selling price of whitefish from all other lakes exceeds the average price for G. S .L. whitefish.

The future of the Great Slave Lake fishery, may very well depend upon whether or not buyers perceive G.S .L. whitefish to be a premium quality product. The purpose of the analysis included in this chapter is to raise the questions rather than answer it. For the purpose of this paper, we accept the explanation of the F. F.M.C. since they are in contact with the market and we are not. Should we be engaged to perform the additional study for which a proposal has been submitted, then we will examine this question more thoroughly, and include in our examination interviews with brokers and fish buyers.

One disturbing feature with regard to the fresh whitefish sales is that the sale of G.S. L. winter whitefish is declining both as a ratio of the total G.S .L. production and as a ratio of the total whitefish sales. This trend could be dangerous to the future of the Great Slave Lake, and definitely requires further analysis.

The factors listed in points 2 to 6 may simply be factors that were specific to the 1980 - 81 year, or could be factors that are common to all years. Specifically, the production of the higher value product mix resulted from the recommendations of our 1978 study, entitled "Hay River Fish Plant, A Study of Alternate Production Plans". Production of the whitefish fillets (100, 000 pounds) resulted in an increase of returns to the provincial pool of $25,000 as apposed to producing whole frozen dressed export whitefish. However, it is significant that the F.F.M.C. has not utilized a G.D.A. grant to expand the Hay River Plant processing capacity. It would appear that the direction for the future may be to revert to the production at the Hay River Plant of frozen products that will yield a lower net return to the fishery. Products producing greater returns would be produced at the F. F.M. C. 's Transcona Plant. Production planning of this type would significantly reduce the returns to the N.W. T. fishery under the concept of provincial species pooling.

Corrections to some of the factors listed above could be made within the species poling system. Such corrections would result in greater returns to the N. W. T. fishermen, without resorting to provincial species pooling. Further analysis is required in this area.

E. OTHER YEARS

Based on our analysis of fresh sales for the year ended April 30, 1979 and 1980, we strongly suspect that for those years there would be even a greater differential than for 1981 between provincial species pool and a pool calculated under the terms of the guarantee agreements. However, for the years ended April 30, 1977 and 1978 we recall (the guarantee agreement specified provincial

pools), that the provincial pools were lower than the results would have been under species pooling. The reason for the lower provincial pools during those years were as follows:

1. The plant basically produced whole frozen dressed whitefish during a period when the inventories of this product were extremely high and the selling price was low.
2. The method of calculation of a provincial species pool for 1977 differed from the method employed by us in calculating the 1981 provincial species pool. The difference was that as a result of an agreement with the Government of Saskatchewan, the N.W.T. pool was credited with the actual volume of its fresh sales, but at the average selling price of all fresh sales for product from all lakes. Employing this method for 1981 would reduce the provincial species pool by more than $90,000.

For 1978, the method employed to calculate the provincial pool was identical to the method employed by us for the 1981 calculation.

F. EXPECTATIONS FOR THE FUTURE

Unless there are changes rode, for the future we expect a trend that would result in movement towards lower provincial species pools as compared to species pools. The reasons for this are as, follows:

1. There may be a trend towards replacing the G.S.L. whitefish in the winter fresh market with whitefish from other lakes.
2. There may be a movement back towards producing less profitable frozen products at Hay River and more profitable processed products at Transcona. The major factors that resulted in the turn around from a position of higher species pools to a position of higher provincial species pools were

the improved position of frozen dressed whitefish as a result of a 1978 sale of all whitefish inventories to Poland, and a change in the production plan for the Hay River Plant (as a result of our 1979 report) to produce greater volumes of the more profitable processed products . However, the frozen whitefish position is deteriorating, and our 1979 expectation both as to the market for processed whitefish products, and the F .F .M. C. willingness and ability to produce these products at the Hay River Plant have not keen met.

G. CONCLUSIONS

From the analysis included in this chapter, we conclude the following:

1. For the year ended April 30, 1981, the N.W. T. fishermen would have received approximately $169,000 more had their fish prices been calculated under the terms of a provincial species pool, as apposed to the terms of the guarantee agreement. The major factor creating the differential was the high selling price obtained during the winter season from sales of fresh dressed G. S. L. whitefish.
2. Although there is no question that the major factor creating high fresh prices for G.S. L. whitefish is the timing of the fresh sales, our analysis of actual fresh sales leaves sufficient doubt to justify further analysis to determine whether there is specific buyer demand for G.S. L. whitefish.
3. Further analysis of the pools for the years ended April 30, 1979, 1980, and possibly 1982 is warranted to determine whether adjustments could be made to the species pooling system to better accomodate the N.W. T. fishery.
4. ' We are of the opinion that unless there are changes to current trends, for the future the movement will be towards a position whereby a Provincial species pool for the N.W. T. will produce lower returns than a species pool. The factors

that would contribute to this position are as follows:

a. The replacement of winter sales of fresh G.S.L. whitefish with whitefish from other lakes;

b. The deteriorating position of frozen dressed export whitefish;

c. The production of lower volumes of whitefish fillets at Hay River and conversly the production of higher levels of frozen dressed whitefish;

5. Since 1976, it may be that the N.W.T. has been subjected to pooling systems resulting in the lowest return to the N.W. T. It may appear to the reader that there was discrimination on the part of the management and Directors of the F.F .M. C. against the N.W. T. fishermen. This is not the case. The 1976 change to provincial pooling was the result of prolonged pressure from the Government of Saskatchewan. Also, as the person most responsible (as controller of the F.F .M. C.) for the change in 1978 from a system of provincial species pooling to a system of species pooling, I can state that the intent of the change was to prevent a disaster in the N.W.T. The fact that on an actual basis, the species pooling system may have returned less revenues to the N. W. T., resulted from a windfall sale and work performed by our firm to upgrade the returns from the G.S .L. fishery. Neither 'factor was centemplated at the tire the agreen-lent to change the system was negotiated.

H. RECOMMENDATION

Based on the conclusions of this chapter we recommend that additional study of the years ended April 30, 1978, 1979, and possibly 1982 be performed. The major purpose of this study would be to determine whether ways could be found to modify the species pooling systems to better accomodate the N.W.T. fishery.

CHAPTER III

SUBSIDIZATION OF THE SUMMER FISHERY BY THE WINTER FISHERY

A. OVERVIEW

For some species, most notably export whitefish, the summer fishery is subsidized by the winter fishery. During the winter, the sale of export whitefish in the fresh dressed form creates significant net returns for the fishery. Although a premium is paid to the fishermen on winter catch, the premium is significantly lower than the additional net returns earned fran the fish. The additional returns are used to increase the summer price of export whitefish.

Under the conditions of provincial species pooling, we have calculated a winter pool for the year ended April 30, 1981. We estimate that for this year, the average price of winter fish could have been increased by between $.10/lb. and $.20/lb. if it were not for subsidizing summer fish prices. We have not calculated a separate subsidy for export whitef ish, but it would be significantly higher than the average for all species.

In chapter IV, we discuss the ef feet of this subsidization on fishermen's initiative to fish winter as apposed to summer. We conclude that the hidden subsidy is discouraging winter fishing, and effectively reducing the net returns from the total fishery, and fishermen's net income. To reverse this trend, we are

recommending that higher winter premiums should be paid. However, we qualify this to the extent that the premiums should not be so high as to generate more production than can be sold in the fresh market.

B. ANALYSIS

The increased returns from the winter fishery result from the higher selling prices for fresh fish during the winter season, and the lower cost of packing fresh fish as apposed to freezing and/or processing it. The higher selling prices are the result of the demand and supply. During the winter season, as a result of a number of ethnic holidays, there is a significant demand for fresh fish, particularly fresh dressed export whitefish. During the winter, the supply of export whitefish both form the F.F.M.C. territory, and from the Great Lakes is significantly lower than during the summer season. These factors result in winter. prices that in some cases double the summer price for fresh whitefish. We should also mention that the demand although strong for most of the winter season, does have significant peaks, basically associated with the ethnic holidays. In the previous chapter, we presented a monthly analysis of fresh export medium dressed whitefish sales for the previous two years. The reader by examining this table (table 5), can be better apprised of the changes in the market price of whitefish on a monthly basis.

The other factor causing increased whitefish returns from the winter season is the comparative cost of fresh packing as apposed to freezing or processing and freezing fish. It will be obvious to the reader that the direct costs associated with packing of fish would be lower than the cost of freezing and/or processing and freezing. However, we must also consider the factor, particularly when examining

the N.W.T. on a provincial species pealing hasis, that the processing and freezing facilities are required basically for the purposes of the summer fishery.

To determine the extent of subsidization of the summer fishery by the winter fishery, we have considered the N.W.T. to be a provincial species pool. Furthermore, we have examined the winter fishery under the conditions of two cases. The first, considers the actual position for 1981 whereby the fish was packed at the Hay River Plant. However, because the Hay River Plant is essentially required for the summer season, we allocate a greater portion of some fixed costs to the summer season (depreciation, fixed asset interest, etc.) . In table 6 we present the results of this analysis. We calculate a winter pool amounting to $129,000 as compared to the pool previously presented for the total year of $112,000. Under these conditions, the winter fishery could pay an additional $.10/lb. for all species, if it were not for the requirement to subsidize the summer fishery. we have not calculated a separate winter whitefish pool, but we would estimate that the winter - summer subsidy for whitefish would be significantly higher than' for the average of all species.

The operating costs of packing at the Hay River Plant dining the winter 1980 81 amounted to approximately 3.5 tires the costs nom-ally incurred for a similar packing operation. Because the fish plant is in place to handle summer whitefish, one could consider that there is an additional subsidy of summer fish equivalent to the extra costs of operating at the Hay River Plant during the winter season as apposed to operating at a station designed for fresh packing only. When this opportunity cost is completely considered, we estimate that the winter production could bring an extra $.20/lb. (delivered weight) if it were not required to subsidize the summer production.

Pickerel	Trout	Northern Pike	Inconnu	In 'Transit	Total
28	12	122	33		899
1	'5	7	-		'71
27	_7	115	33		828
65	10	104	29		956
7	1	5	2		96
		(2)			(1)
		"(1)	(1)		(15)
					(7)
(1)	(1)	(2)			(lo)
71	10	104	30		1019
					20
					1039
					28
					13
					24
					(20)
					45
					9
					(2)
					"16
					23
					493
(1)	(4)	(4)		22	(36)
					457
					36
					4
					107
					-
					73
					44
					4
					-
					268
					-
					268
9		12	3		111
					135
					6
					$129
					$/lb. = $.14/

c. WINTER PREMIUMS

It is the policy of the F. F.M. C. to pay premiums on winter whitefish production. The intent of the premium is twofold. First the premium is intended to compensate the fishermen for higher operating costs incurred during the winter season. Secondly, the premium is intended to stimulate increased production during the winter season, and create a supply of fresh fish sufficient to meet the market demand. Our comparative analysis of fishermen's incomes included in Chapter IV , indicates that for the seasons studied, the premium has been approximately adequate to cover the extra costs of operating during the win& season. We question whether or not the premium has been adequate to generate sufficient supply to meet the peak of the winter market demand. The F. F.M.C. states that the premium has been more than adequate to attract sufficient supply to satisfy the market for fresh sales. Once again, without preforming a detailed analysis, we are required to accept their opinion since,. they are in contact with the market and we are not.

Based on our analysis of fishermen's incomes since 1978, and numerous interviews with G. S .L. fishermen, we are convinced that the policy of hidden subsidies is discouraging the fishermen's winter effort and encouraging them to fish more intensively during the summer season. With two exceptions, all the fishermen interviewed were of the opinion that they were earning less during the winter season than during the summer season. This was even the case, where our analysis of fishermen's winter and summer incomes indicated that they are earning more from winter fishing. The fishermen's basic premise was that the costs of operating Bombadier Snowmobiles far exceeded the cost of operating boats, and shipping via the H. Broadhead. None of the fishermen were aware that the direct charge to them for freighting on the H. Broadhead amounted to only approximately 20 per cent of the total costs of operating the freighter. Nor were they aware

that these additional costs were hidden in the fish prices, summer and winter. If current pricing policies prevail, we expect that there will be a significant reduction in winter fishing effort, and the complete withdrawal of some fishermen fran the winter fishery. This can only result in a reduction of returns to the total fishcry, and a corresponding reduction in the summer fish price.

D. EFFECT OF THE N.W.T GUARANTEE PROGRAM

Since its inception, the price support program by the Government of the N.W.T. has been directed almost exclusively to the summer fishery. A portion of the program has been directed towards subsidizing the operating rests of the H. Broadhead, whereas none of the program has ever been utilized to subsidize the operating costs of Bombadier snowmobiles.

As in the case of the internal pricing subsidies, the direction of the N. W.T. subsidies has resulted in encouraging summer fishing and, effectively discouraging winter fishing. We appreciate the problem that the subsidies have always been negotiated at the start of the season when the pressure from fishermen is directed at increasing summer prices. However, this does not change the fact that by encouraging summer fishing at the expense of the winter fishery, the subsidy is counter-productive.

E. POOLING AND PRICES TO FISHERMEN

In the previous chapter, we concluded that further analysis is required to determine whether modifications to the existing species pooling system could result in greater returns for the N. W.T. fishermen. One modification that could improve the position of the N.W.T. fishermen, would be to increase the premium on winter whitefish.

Historically, the N.W. T. and the province of Alberta had been the major producers of whitefish during the winter season. Conversely the provinces of Manitoba and Saskatchewan have been the major producers of whitefish during the summer season. Effectively, an increased premium on winter whitefish would result in increased returns to the fishermen of the N.W. T. and Alberta at the expense of the fishermen of Manitoba and Saskatchewan. This must be qualified for changes in production plans that are currently taking place in the fishery. Partly as a result of the significant effort by the F. F. M. C., Manitoba lakes are increasing their winter production of whitefish. Furthermore, we stated in the last chapter, that the proportion of winter G. S. L. whitefish production being sold fresh has been decreasing. These trends, which we believe may be related, could result in the F .F .M. C. commencing to freeze at Hay River during the winter season, and possibly discouraging winter fishing on Great Slave Lake.

The upper level of winter premiums should be the price required to produce sufficient whitefish to satisfy the winter fresh market, but not so much as to result in the requirement to freeze or process significant volumes. The latter would result in reducing net returns to fishermen.

F. CONCLUSIONS

From the analysis included in this chapter we conclude the following:

1. On a provincial species pooling basis, winter production from the N.W.T. would have earned an additional $.10/lb. to $. 20/lb. if it were not for the requirement to subsidize summer fish prices.

2. We conclude that higher premiums on winter whitefish production are warranted, and the payment of these premiums could result in redwing some of the inequities for N.W. T. fishermen Under the current system. However, this must be qualified to the extend that the historical production plan for producing the bulk of winter whitefish from the N.W.T. and Alberta is changing in favour of production from Manitoba, and the premium should not be so great as to result in the requirement to freeze or process significant volumes.
3. Additional analysis is required to determine the potential for increasing returns as a result of increased winter production.
4. The price subsidy programs of the Government of the N.W. T. have been counter-productive to the extent that they encourage summer fishing rather than winter fishing.

G. RECOMMENDATIONS

Based on the conclusions of this chapter we recommend the following:

1. Additional detailed analysis be performed to determine the extent to which the returns fran the N.W.T. fishery could be increased by encouraging winter production.
2. The Government of the N.W.T. should adjust its guarantee program to provide greater support for the winter fishery.

CHAPTER lV

FISHERMEN'S INCOMES

A. OVERVIEW

Commencing with the winter of 1978 - 79, we have preformed a detailed study of the incomes of G.S. L. fishermen and their operating expenses. We previously reported on the results of our analysis with regard to fishermen's winter incomes for 1978 - 79 and 1979 - 80, and fishermen's summer incomes for 1979 and 1980 In this report we complete our analysis, by analyzing fishermen's incomes for the winter of 1980 - 81 and the summer of 1981, and by comparing and analyzing fishermen's incomes and costs as a trend from 1978 through 1981.

We guaranteed the fishermen that they would not be identified, and that the data supplied to us would not receive general distribution. Although we identify fishermen only by code, it is possible that they may be identified by the results of their operations. The distribution of prior reports that included income analysis has been on a limited basis to the Department of Commerce. We are requesting that copies of this report not be distribute outside the Department of Commerce, unless the tables of fishermens' operating incomes are removed

Our additional analysis included in this chapter supports the basic conditions of our prior analysis of fishermen's incomes . Current prices are just barely adequate to allow fishermen to cover their operating costs, finance their capital expenditures, and receive a small remuneration for their own efforts.

The remuneration in most cases is probably less then they could obtain working at an unskilled job. Based on our analysis of fishermen's incomes for 1978 - 81, we estimate that the break even levels and prices on a flexible budget basis for a reasonably efficient typical G.S.L. operation are as follows:

SUMMER SEASON

Catch Delivered	Break Even Price
70,000 lbs.	$.48/lbs.
85,000 lbs.	$.43/lbs.
100,000 lbs.	$.40/lbs.

WINTER SEASON

Catch Delivered	Break Even Price
60,000	$ .57/lb.

Our analysis of the selected fishermen's operating statements forthefour year period, indicates that when abnormal factors are removed, fishermen's net incomes for summer andwinterwere approximately equal. Effectively the F.F.M.C. 'S primary objective of paying winter premiums to offset high operating costs was satisfied.

Our analysis of the trends for the period and discussions with the fishermen indicates that over the period the most significant factors in determining fishermen' s net income were fishing conditions and possibly fishermen's motivation rather than relatively small changes in the prices paid to fishermen.

B. FISHERMENS' INCOMES, WINTER 1980 - 81

In tables 7 and 8 we present schedules of operations for our selected fishermen for winter 1980 - 81. The major significancee of our analysis as compared to prior analysis is as follows:

1. The winter income for this year for our selected fishermen is equivalent or slightly higher than their summer incomes. The higher direct operating costs of the winter season are offset by the premium paid by the F .F.M. C. for winter fish. However, if the winter fish prices reflected the true return for the winter season as calculated by us in Chapter 3, then the fishermen s winter income would be approximately double their summer income for the same year. Because of changes in the methods of operations for some of the fishermen surveyed, it is difficult to compare this winter with our prior analysis of 1978 - 79. But in general it can be stated that costs have increased by approximately the rate of inflation. The cost of wages and feul have increased by a greater multiplier.

C. ANALYSIS OF OPERATIONS, SUMMER 1981

The summer of 1981 was a poor season in terms of net returns for the f ishermen included in our samples. Most of the f ishermens' volumes decreased from the previous year, some of them substantially. " The calculated net income of fishermen varied from a loss of $12,000 to profit of $10,000. These results are significantly lower than for the summer of 1980.

1E	2C	2B	2D	2E	3B	3D	3E
	24.4	6.1	22.2	24.1	8.8		
	8.8		6.1	9.8	2.9		
	2.4	.4	5.7	1.5	.9		
	1.7	.7	3.0	2.5	2.2		
			1.4				
	2.4	.9	8.1	3.6	1.4		
			.2	-	.1		
	15.3	2.0	24.6	17.4	7.5		
	2.0	2.0			2.0		
	7.1	2.1	(2.4)	6.7	(.7)		
	.9	.1	.7	.7	.2		
	8.0	2.2	(1.7)	7.4	(.5)		
	1.0	1.0	1.0	1.0	1.0		
	1.3	1.3	1.3	1.3	1.3		
	2.3	2.3	2.3	2.3	2.3		
	5.7	(.1)	(4.0)	5.1	(2.8)		

TABLES 7 - 11

STATEMENT OF ASSUMPTIONS

1. The source for actual costs and revenues includes:

   a. F.F. M. C. records
   b. Fishermen's records

2. Camp expenses for all fishermen except for fisherman IA, 1C, and n), include personal purchases by the fishermen from the F.F.M. C. store. we estimate the amount of these personal purchases could average $2,000 to $3,000 per season.

3. Estimated expenses paid by the fishermen were estimated by ourselves based on discussions with the fishermen.

4. Assigned capital charges:

   The assigned capital charges are hypothetical costs calculated by ourselves. We have assigned these costs rather than using actual costs because they result in more meaningful comparisons between fishermen, and present a better picture of the position of the new fishermen entering the fishery.

   The capital charges are based on the following:

a. Capital cost of the f ishing boat -	$30,000
b. Depreciation of fishing boat	20 years s.l.
c. Interest rates - 1978-1980-14%; 1981-18%	
d. Capital cost of used Bombadier	$ 5,000

TABLE 7A

CATCH AND GROSS INCOME STATISTICS

SELECTED FISHERMEN AND ALL FISHERMEN

WINTER 1980-81

(nearest 1,000 lbs., $1,000)

	Number of Fishermen	Actual lbs.	$	Number of Deliveries	----Per Delivery---- Delivery Weight	Delivery $
Group 1						
1A		55.3	29.4	29	1.9	1.0
1B		137.1	77.5	36	3.8	2.2
1C		104.0	52.0	78	1.3	.5
1D		104.8	51.7	51	2.1	1.0
Total Group 1	4	401.2	210.6	194		
Average Group 1		100.3	52.7	Q	2.1	1.1
Group 2						
2A		22.6	12.3	14	1.6	.9
2B		11.1	6.1	4	2.8	1.5
2C		48.3	24.4	34	1.4	.7
2D		42.7	22.2	30	1.4	.7
2E		46.7	24.1	38	1.2	.6
Total Group 2	5	171.4	89.1	120		
Average Group 2		34.3	17.8	24	1.4	.7
Group 3						
3A						
3B		16.2	8.9	26	.6	.3
3C						
Total Group 3	1	16.2	8.9	26	.6	.3
Total sample fishermen	10	588.8	308.6	340		
Total all fishermen		889.1	465.3	804		
Sample fishermen/ All fishermen		66%	66%	42%		

1E	2C	2B	2D	2E	3B	3D	3E
	.505	.550	.520	.516	.547		
	.182		.145	.210	.180		
	.050	.036	.133	.032	.056	-	
	.035	.063	.070	.054	.137		
			.033	-	-		
	.050	.082	.190	.077	.087		
	____	____	.005	____	.006		
	.317	.181	.576	.373	.466		
	.041	.180	____	____	.124	,	
	.147	.189	(.056)	.143	(.043)		
	.019	.009	.016	.015	.012		
	.166	.198	(.040)	.158	(.031)		
	.021	.090	.023	.021	.062		
	.027	.117	.030	.028	.081		
	.0	4.208	.053	.049	.143		
	.118	(.009)	(.093)	.109	(.174)		

The fish prices for the summer of 1981 were supported at the same level as the summer of 1980. Fishermens' operating costs increased during the summer of 1981, but the major factor resulting in reduced net incomes appears to be poorer fishing.

In table 9 we present statements of operations for our selected fishermen for the summer of 1981.

D. TREND ANALYSIS 1978 - 81

The reader should take careful note of the statement of assumptions appended to the tables. In particular, the reader should note that the capital charges have been assigned by us, based on estimated replacement cost. Finance interest was calculated at 12 percent for the years prior to 1981 and at 18 percent for 1981. Actual finance costs for most operations will be less than the cost assigned by us.

In tables 11A through 11E we present comparative schedules of operations for five fishermen included in our sample of selected fishermen. In table 10, we also present an income statistics analysis for these fishermen.

We will allow the reader to study the statistics and form his own conclusions. In general it can be stated that with the exception of the winter 1978 - 79 the fishermen incomes were just sufficient to finance their equipment and receive a low to reasonable return for their efforts. However, for the summer of 1981 incomes have fallen fairly substantially. The major factor. creating the drop in income for 1981 was a reduction in volume of catch delivered, rather than increases in operating costs.

The fishermen are currently operating at very close to break even volumes at a break even price.

1E	2A	2A-1	2D	2E	3B	3D	3E "
47.1		31.9	44.4	28.9	3.5		
12.7		6.7	14.0	8.4			
8.0		2.5	3.4	1.7	.8 .		
1.6		2.3	3.6	● 7	.1.3		
					.1		
7.1		2.8	7.5	4.4	.5		
.6							
.1		.1	2.5	.1	.1		
		.9	.4				
30.1		15.3	31.4	15.3	2.8		
7.0		3.0	2.0	4.0	1 . 0		
10.0		13.6	11.0	9.6	(. 3)		
10.0		13.6	11.0	9.6	(.3)		
1.5		1.5	1.5	1.5"	.6		
		.1					
5.5"		5.5	5.5	5.5	2.0		
7.0		7.1	7.0	7.0	2.6		
3.0		6.5	4.0	2.6	2.3		
17.0		13.5	4.1	15.7	1.6		

With regard to fishermen's motivation, based on our discussions with some of the fishermen in our sample, we are of the opinion that the fishermen's moral is being damaged by the rapidly decreasing price (before government subsidies) for G.S.L. whitefish. The fishermen intervi" ewed are very concerned about the viability of the G. S .L. fishery. They believe that the fishery cannot continue much longer under conditions of increasing requirements for government subsidies. They are particularly concerned that the real. fishermens' price for G. S.. L. whitefish is now less than it was in 1969.

In general fishermen's net incomes are falling as a result of fairly static revenues, and costs that are slowly increasing. With the exception of fuel costs most of the fishermen's operating expenses have increased at a lower rate than the general inflationary rate.

Fishermen's incomes for the summer of 1981 were very close to the break even level. The level of fishermen's incomes for that season may have been effected by poor conditions. However, we do believe that the results for that season are significant in terms of future trends. For future years we believe that the fishery could not survive any major price reduction. Reductions in price, particularly if coupled with a tight credit policy on part of the F. F. M. C., could result in some of the major producers withdrawing from the fishery.

E. CONCLUSIONS

Based on our analysis of fishermen's incomes and trends we make the following inclusions:

1. Fishermen's incomes are effected to a greater extent by fishing conditions, and the fishermen's motivation than by small changes in fish prices.
2. The fishing operations on G.S. L. are operating at close to the breakeven level. A price reduction, particularly if accompanied by tight credit could result in migration of some fishermen from the fishery.

TABLE 10

GREAT SLAVE LAKE FISHERY

CATCH AND INCOME STATISTICS

SELECTED FISHERMEN

1978 - 1981

	Lbs. Delivered	Payment to Fishermen (Initial and Final)	Average Price $/lbs.	Net Income	Net Income/ Lbs. Delivered
Fisherman IA					
Winter 1978 - 79	102.0	70.1	.687	24.0	.235
Winter 1980 - 81	137.1	80.3	.585	10.2	.074
Summer 1979	135.0	55.2	.409	8.6	.064
Summer 1980	204.0	82.2	.402	26.7	.130
Summer 1981	172.4	64.3	.373	10.2	.059
Fisherman 1B					
Winter 1978 - 79	115.5	61.1	.529	26.4	.228
Winter 1980 - 81	55.3	31.3	.566	(5.1)	(.092)
Summer 1979	84.0	32.3	.384	(7.5)	(.089)
Summer 1980	72.0	31.7	.440	1.2	.016
Summer 1981	81.8	39.3	.480	(1.6)	(.020)
Fisherman 1C					
Winter 1978 - 79	85.3	55.2	.647	9.1	.106
Winter 1980 - 81	104.0	57.1	.549	8.4	.080
Summer 1979	89.0	42.3	.475	5*4	.060
Summer 1980	108.0	48.5	.449	14.7	.136
Summer 1981	57.3	28.8	.503	(5.7)	.099
Fisherman 1D					
Winter 1978 - 79	63.6	39.1	.614	10.5	.165
Winter 1980 - 81	104.8	55.1	.525	10.3	.098
Summer 1979	116.0	30.6	.263	(5.8)	(.050)
Summer 1980	98.0	33.0	.336	(1.8)	(.018)
Summer 1981	77.4	32.4	.419	(1.6)	(.021)
Fisherman 2E					
Winter 1978 - 79	36.9	22.3	.604	9.5	.257
Winter 1980 - 81	46.7	24.8	.531	5.1	.109
Summer 1979		31.4		7.8	
Summer 1980	65.0	27.1	.416	6.8	.104
Summer 1981	65.3	28.9	.442	2.6	.040

TABLE 11A

SELECTED FISHERMEN, FISHERMAN IA

COMPARATIVE SCHEDULE OF OperatiOnS

1978 - 81

	Winter		Summer		
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	54.4	77.6	51.9	82.0	64.3
Operating expenses:					
Crew wages and benefits	12.7	24.2	17.1	18.9	17.6
Fishing supplies	2.7	.6.4	4.0	4.4	7.0
Fuel and oil	3.4	13.9	1.8	3.1	4.0
Repairs and maintenance	.8	8.0	.2	2,8	1.5
Camp	3.2	11.2	3.1	7.4	8.0
Freighting, H. Broadhead			3.7		
Commercial carriers	6.2		1.0	4.9	
Truck and auto	.6			.9	.1
sundry	.6	1.7	1.3	1.6	1.9
Total operating expenses	30.2	65.4	32.2	44.0	40.1
Estimated expenses paid by Fishermen	12.0	____	3.0	-	____
Income (loss) before final payment and assigned capital charges	12.2	12.2	16.7	38.0	24.2
Final payment	15.7	2.7	3.3	.2	____
Income (loss) before capital charges	27.9	14.9	20.0	38.2	24.2
Assigned capital charges:					
Depreciation,	2.3	2.3	3.0	3.0	3.0
Working capital interest				.1	
Finance interest	1.6	2.4	8.4	8.4	11.0
	3.9	4.7	U. 4	11.5	14.0
Net income	24.0	10.2	8.6	26.7	10.2

TABLE 11A

SELECTEFISHERMEN, FISHERMAN IA

COMPARATIVE CHEDULE OF OPERATIONS

1978 - 81

	Winter		Summer		
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	.533	.566	.384	.402	.373
@crating expenses:					
Crew wages and benefits	.125	.177	.127	.093	.102
Fishing supplies	.026	.047	.030	.020	.041
Fuel and oil	.033	.101	.013	.012	.023
Repairs and maintenance	.008	.058	.001	.007	.009
Camp	.031	.082	.023	.034	.046
Freighting, H. Broadhead			.027	.024	
Commercial carriers	.061		.007	.004	
Truck and auto	.006			.008	.001
sundry	.006	.012	.010		.011
Total operating expenses	.296	.477	.238	.202	.233
Estimated expenses paid by Fishermen	.117	—	.015	.010	—
Income (loss) before final payment and assigned capital charges	.120	.089	.131	.190	.140
Final payment	.154	.019	.024	.020	—
Income (loss) before capital charges	.274	.108	.155	.210	.140
Assigned capital charges:					
Depreciation,	.023	.017	.022	.015	.017
Working capital interest		.017			
Finance interest	.016		.062	.041	.064
	.039	.034	.034	.056	.081
Net income	.235	.074	.071	.154	.059

TABLE 11B

SELECTED FISHERMEN, FISHERMAN 1B

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 1981

	------Winter------		———	umme ———	
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	46.2	29.4	29.3	30.0	39..3
Operating expenses:					
Crew wages and benefits	9,6	12.0	11.5	10. 9	10.6
Fishing supplies	1.9	3.0	3.5	1.2	4.2
Fuel and oil	3.0	5.9	3.6	1.3	2.0
Repairs and maintenance	.5	1.3	.7	.6	.7
Camp	4.4	6.4	5.5	6.8	8.0
Freighting, H. Broadhead			1.9	1.6	
commercial carriers	7.7	.2	3.1	.2	.3
Truck and auto	2.1		.8	.5	2.6
sundry	.8	.1	2.5	.2	2.0
Total operating expenses	"30.0	28.9	33.1	23.3	30.4
Estimated expenses paid by Fishermen	"2". 0	4.0	-1.0	1.0	-3.0
Income (loss) before final payment and assigned capital charges	14.2	(3.5)	(4.8)	5.7	5.9
Final payment	14.9	1.9	3.0	1.7	-
Income (loss) before assigned capital charges	29.1	(1. 6)	(1.8)	7 . 4	5.9
Assigned capital charges:					
Depreciation,	1.4	- 1.4	1.5	1.5	1.5
Working capital interest		.1		.5	. 5
Finance interest	"1. 3	2.0	4.2	4.2	5.5
	2". 7	3*5	5.7	6.2	7.5
Net income (loss)	"26"0 4	(5. 1)	(7. 5)	1.2	(1. 6)

TABLE 11B

SELECTED FISHERMEN, FISHERMAN 1B

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 81

	Winter		Summer		
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	.400	.532	.349	.337	.480
Operating expenses:					
Crew wages and benefits	.083	.217	.136	.123	.130
Fishing supplies	.016	.054	.042	.013	.051
Fuel and oil	.026	.107	.043	.015	.024
Repairs and maintenance	.004	.024	.008	.007	.009
Camp	.038	.116	.065	.076	.098
Freighting, H. Broadhead			.023	.018	
Commercial carriers	.068	.004	.037	.002	.004
Truck and auto	.018		.010	.006	.032
sundry	.007	.001	.030	.002	.024
Total operating expenses	.260	.523	.394	.262	.372
Estimated expenses paid by Fishermen	.017	.072	.012	.011	" .037
Income (loss) before final payment and assigned capital charges	.123	(. 063)	(. 057)	.064	.071
Final payment	.129	.034	.036	.017	
Income (loss) before capital charges	.252	(. 029)	(. 021)	.081	.071
Assigned capital charges:					
Depreciation,	.012	.025	.018	.017	.018
Working capital interest		.002		.006	" .006
Finance interest	.011	.036	. 050	..047	.067
	.023	.063	.068	.070	.091
Net income	.229	(. 092)	(. 089)	.011	(. 020)

TABLE 11C

SELECTED FISHERMEN, FISHERMAN 1C

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 81

	Winter		Summer		
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	43.1	52.6	37.8	46.5	28.8
Operating expenses:					
Crew wages and benefits	14.2	17.0	11.7	10.7	10.8
Fishing supplies	5.0	4.5	1.6	3.5	2.4
Fuel and oil	5.6	8.8	3.1	1.2	1.6
Repairs and maintenance	3.1	3.2	2.0	.2	
Camp	5.1	8.0	5.8	7.1	7.1
Freighting, H. Broadhead			2.0	1.4	
Commercial carriers	5.8	.7	2.7	.8	
Truck and auto	2.3		.4	1.2	2.9
sundry	.3	.2	.9	.1	
Total operating expenses	41.4	42.4	30.2	26.2	24.8
Estimated expenses paid by Fishermen	2.0		1.0	1.0	2.0
Income (loss) before final payment and assigned capital charges	(.3)	10.2	6.6	19.3	2.(-)
Final payment	12.1	4.5	4.5	2.0	
Income (loss) before assigned capital charges	11.8	14.7	11.1	21.3	2.0
Assigned capital charges:					
Depreciation,	1.4	2.9	1.5	1.5	1.5
Working capital interest		.4		.9	.7
Finance interest	1.3	3.0	4.2	4.2	5.5
	2.7	6.3	5.7	6.6	7.7
Net income (loss)	901	8.4	5.4	14.7	(5.7)

TABLE 11C

SELECTED FISHERMEN, FISHERMAN 1C

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 81

	Winter		Summer		
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	.505	.507	.425	.431	.503
Operating expenses:					
Crew wages and benefits	.166	.164	.132	.099	.188
Fishing supplies	.059	.043	.019	.032	.042
Fuel and oil	.066	.085	.036	.011	.028
Repairs and maintenance	.036	.031	.022	.002	
Camp	.060	.077	.065	.066	.124
Freighting, H. Broadhead Commercial carriers	.068	.007	.022 .030	.013 .007	
Truck and auto	.027		.004	.011	.051
sundry	.004	.002	.010	.002	
Total operating expenses	.486	.409	.340	.243	.433
Estimated expenses paid by Fishermen	.023		.011	.009	.035
Income (loss) before final payment and assigned capital charges	(.004)	.098	.074	.179	.035
Final payment	.142	.043	.051	.020	
Income (loss) before capital charges	.138	.141	.125	.199	.035
Assigned capital charges:					
Depreciation,	.016	.028	.017	.014	.026
Working capital interest		.004		.008	.012
Finance interest	.015	.028	.047	.039	.096
	.032	.060	.064	.061	.134
Net income	.107	.081	.061	.138	(.099)

TABLE 11D

SELECTED FISHERMEN, FISHERMAN 1D

COMPARATIVE SCHEDULE OF OPERATIONS

1978 "- 81

	Winter		Summer		
	1'378-79	1980-81	1'379	1980	1981
Gross revenue, initial payment	30.7	53.4	29.1	32.8	32.4
Operating expenses:					
Crew wages and benefits	13.7	19.2	9.3	12.2	"7.6
Fishing supplies	3.2	5.1	2.1	1.1	1.8
Fuel and oil	3.2	3.6	2.2	.8	1.6
Repairs and maintenance	.8	5.2	2.1	1.3	
Camp	3.0	5.7	3.2	3.9	4.7
Freighting, H. Broadhead			2.0	2.5	
commercial carriers		.6	.8	.5	.1
Truck and auto	.9		1.0		.7
sundry		.1	1.3		.5
Total operating expenses	24.8	39.5	24.0	22.3	17.0
Estimated expenses paid by Fishermen	"2.0	3.0	1.0	1.0	3.0
Income before final payment and assigned capital charges	3.9	10.9	4.1	9.5	12.4
Final payment	8.4	.1.7	1.5	.2	
Income before assigned capital charges	12.3	12.6 "	5.6	9 . 7	12.4
Assigned capital charges:					
Depreciation,	1.0	1.0	3.0	3.0	3.0
Working capital interest		-		.1	
Finance interest	.8	1.3	8.4	8.4	11.0
	1.8	2.3	11.4	11.5	14.0
Net income (loss)	10.5	10.3	(5.8)	(1.8)	(1.6)

TABLE 11D

SELECTED FISHERMEN, FISHERMAN ID

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 81

	Winter				
	1978-79	1980-81	1979	198(')	1981
Gross revenue, initial payment	.483	.510	.251	.335	.419
Operating expenses:					
Crew wages and benefits	.2"15	.183	.080	.1.24	.098
Fishing supplies	.050	.049	.018	.011	.023
Fuel and oil	.050	.034	.019	.008	.022
Repairs and maintenance	.013	.050	.018	.013	
Camp	.047	.054	.028	.040	.061
Freighting, H. Broadhead commercial carriers		.006	.017 .007	.026 .006	.001
Truck and auto	.015		.009		.009
sundry	-	.001	.011		.006
Total operating expenses	.390	.377	.207	.228	.220
Estimated expenses paid by Fishermen	.031	.029	.009	.010	.039
Income (loss) before final payment and assigned capital charges	.062	.104	.035	.097	.160
Final payment	.132	.016	.013	.020	
Income (loss) before capital charges	.194	.120	.048	.117	.160
Assigned capital charges:					
Depreciation,	.016	.010	.026	.030	.039
Working capital interest				.001	
Finance interest	.013	.012	.072	.086	.142
	.029	.022	.098	.117	.181
Net income (loss)	.165	.098	(.050)		(.021)

TABLE 11E

SELECTED FISHERMEN, FISHERMAN 2E

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 81

	------Winter ------		---------- -sir ----------		
	1'378-79	1980-81	1979	1980	1981
Gross revenue, initial payment	17.2	24.1	29.9	27.0	28. 9
Operating expenses:					
Crew wages and benefits	4.1	9.8	8.4	6.0	8.4
Fishing supplies	1.5	1.5	1.6	.1	1.7
Fuel and oil	1.6	2.5	.5	.5	.7
Repairs and maintenance				1.1	
Camp	2.8	3.6	3.1	2.9	4.4
Freighting, H. Broadhead				2.3	
Commercial carriers					
Truck and auto			0 3		.1
sundry				.2	
Total operating expenses	10.0	17.4	13.9	13.1	15.3
Estimated expenses paid by Fishermen	1.0		4.0	1.5	4.0
Income before final payment and assigned capital charges	6.2	6.7	12.0	12.4	9.6
Final payment	5.1	.7	1.5	- 1	
Income before assigned capital charges	11.3	7.4	13.5	12.5	9.6
Assigned capital charges:					
Depreciation,	1.0	.1.0	1.5	1.5	1.5
Working capital interest				4.2	
Finance interest	.8	1.3	4.2	5.7	5.5
	'1.8	2.3	5.7		7.0
Net income	: '9.5	5.1	7 . 8	6.8	2.6

TABLE 11E

SELECTED FISHERMEN, FISHERMAN 2E

COMPARATIVE SCHEDULE OF OPERATIONS

1978 - 81

	Winter		Summer		
	1978-79	1980-81	1979	1980	1981
Gross revenue, initial payment	.466	.516		.415	.443
Operating expenses:					
Crew wages and benefits	.111	.210		.092	.129
Fishing supplies	.041	.032		.002	.026
Fuel and oil	.043	.054		.008	.011
Repairs and maintenance				.017	
Camp	.076	.077		.045	.067
Freighting, H. Broadhead commercial carriers				.035	
Truck and auto					.002
sundry		-		.002	
Total operating expenses	.271	.373		.201	.235
Estimated expenses paid by Fishermen	.027			.023	.061
Income (loss) before final payment and assigned capital charges	.168	.143		.191	.147
Final payment	.138	.015		.025	
Income (loss) before capital charges	.306	.158		.216	.147
Assigned capital charges:					
Depreciation,	.027	.021		.023	.023
Working capital interest					
Finance interest	.022	.028		.065	.084
	.049	.049		.088	.107
Net income	.257	.109		.128	.040

CHAPTER V

POOLING AND PRICING THEORY AND THE THEORETICAL BASIS FOR SUPPORT OF THE FISHERY BY THE GOVERNMENT OF THE N.W.T.

A. OVERVIEW

The area of pooling, pricing, and government support of the "F. F .M. C. Fishery" is very confused. This is particularly the case as it relates to the N.W. T. since 1976.

Two forms of pooling, with modifications have been employed since the F. F. KC. was establish@. These are "species pooling" and "provincial species pooling". Species pooling refers to the system whereby revenues generated by a species are assigned to the species and all rests incurred by the F.F .M. C. for gathering, packing, processing, storing, and selling products produced from the species are allocated to the species. The residual balance is paid to the fishermen as a price for his catch. Provincial species pooling sub-divides the pools by province of origin.

we examine the pooling methods of the F. F.M.C. on a. historial basis, and determine that the change in pooling methods basically resulted from pressure from the provinces, specifically the province of Saskatchewan. The 1977 change to provincial species pooling was demanded by Saskatchewan. The 1979 change back to species pooling was supported by both Saskatchewan and the N.W. T. The N.W.T. effectively expressed its support by refusing to guarantee the full amount that was estimated to be required under provincial species pooling.

We examine the theory supporting the two major pooling methods. We determine that the major advantage of a system of provincial species pooling is that the province receives the net returns generated by the catch delivered from that area. Where a government is required to subsidize the fishery in its area, this method at least gives it some assurance that its subsidies are being directed to the fishery of its own province, and not the fishery of other provinces. However, we also state that a system of provincial species pooling has some very significant disadvantages. With specific reference to the N.W.T. fishery the disadvantages would include the following:

1. The N.W. T. fishery could receive lower returns as a result of discrimination by the management or Board of Directors of the F .F .M. C. in relation to production plarming and sales effort.
2. In a system whereby the N.W. T. was a provincial pool, and the balance of the F. F.M. C. was a species pool, to maximize its returns the N.W.T. would have to compete against all other areas for the right to produce the most , profitable product. We do not believe that the Government of the N.W.T. could be so well informed and have sufficient influence to be successful in this competition.
3. Under the circumstances where the establishment of a provincial species pool for the N.W. T. results in the establishment of provincial species pool for all other provinces, the N.W. T. would be required to compete with each province for the right to produce the most profitable products. This competition would almost certainly result in reduced profitability for the total fishery because of the inefficiencies that would be created. Furthermore, as in point 2, we doubt that the N.W.T. has sufficient influence to win in this type of competition. Certainly this is the opinion that we derive from our observation of events in the fishery since 1973.

In the previous chapter we referred to the possibility of increasing returns to the N.W. T. fishermen by means of increased winter premiums. In this chapter we consider further the possibility of increasing returns to the N.W. T. fishery while remaining within the system of species pooling. We believe that this area requires further analysis, and discussion between the Government of the N.W.T. and the F. F.M.C.

Finally, the F. F.M. C. may be moving in the direction whereby it will utilize the Hay River Plant more for the freezing of the fish, while processing fish at Transcona and obtaining fish for the winter fresh fish market from other provinces, specifically Manitoba. If this production plan were employed together with a system of provincial species pooling, the N.W.T. would suffer.

In summary, we are of the opinion that a system of provincial species pooling cannot work in the long-term to the benefit of the N.W.T. fishery. The final alternative of attempted to maximize returns from the N.W. T. catch by withdrawing the N.W. T. from the F. F. M. C., or drastically altering the syStein to create a de facto withdrawal, is beyond the scope of this study.

In this chapter we also review the theoretical basis for government support of the fishery. We conclude that the existing N.W.T. price support program has been successful, but could be improved by establishing and documenting formal principles for the program.

B. THEORY OF POOLING

1. Definition of pooling policy

Webster's dictionary defines a pool as "an aggregate stake to which each player of a game has contributed" . Essentially, this is the case with the F. F.M.C. and its fishermen. The fishermen contribute their fish as their stake in the game. The residual balance of the revenues derived from the sale of the fish, less the cost of the selling, storing, processing, transporting, packing and gathering the fish is returned to the fishermen in the form of an inital and final payment. The precise way in which the residual balance is divided amongst different fishermen is determined by the method of pooling employed. In all roses, the total residual balance, (less a contingency reserve of 1 per cent of total payments) is returned to the fishermen. Therefore, we should emphasize that if a change in a pooling system is not accompanied by increased returns to the total fishery as a result of greater efficiency, then if it works to the benefit of one fisherman, it must be to the detriment of amther f isherman.

There have keen a n* of terms associated with the F.F .M. C . ' S pooling policy over the years. However, in essence , the F. F.M.C. has employed only two methods since it was established. These are "species pooling" and "provincial species poling". Species pooling referes to the situation whereby fishermen delivering the same species in the same form, and of the same size, at the same time, receive the same price. Traditionally, under this system the fishermen have been responsible for paying the freighting rests of delivering the fish to a basing point (the F .F.M. C. Transcona plant) . Provincial species pooling refers to the situation whereby each fisherman from a specified province who delivers the same species, of the same foxm

and size at the same time, receives the same price for his fish. Under his system the fishermen have also been responsible for paying the costs of the freighting to the basing point.

The species pool consists of the revenue derived from the sale of the products of that species, less the costs incurred to gather, transport, pack, precess, store, and sell these products. The provincial species pool further slices the pie to consider only the revenues and associated costs for fish from a particular province.

The calculation of the pools, is in two steps. Prior to each year, the pools are forecast by the management of the F. F. M. C., and approved by its Board of Directors. Based on the forecast an initial price is set. The basic standard for the initial price is that is should be not more than 80 percent of the total forecast price. Subsequent to the year end, the actual pools are calculated for the year. Should the initial forecast be accurate, then the forecasted residual balance less a contingency reserve will be available for distribution as a final. payment.

2. History of Pooling Systems Under the F .F.M. C.

The F. F.M. C. pooling since its inception can be categorized as follows:

Time Frame	Pooling system
1979 - 1976	Species pooling with cross-subsidization
1977, 1978	Provincial. species pooling with an averaging of sales dollars by like products and a special exception for the CFL (Saskatchewan)
1979- 1981	Modified species pooling
1982	Species pooling

Ebr the early years of the F. F.M.C. its accounting was not sufficiently developed to calculate the pools on an accurate basis. The prices paid were very much established by tradition based on modifications to prices that were in effect during the days of private fisheries. The system also encompassed initial price premiums during the winter season and also premium on lakes whose fish was considered to be of premium quality. The system of provincial species pooling was forced on the F.F .M.C. by the Government of Saskatchewan. Based on our recall, no other province was supportive of this system Of note, in less than two years, the province of Saskatchewan was requesting that the system revert to one of species pooling. In practice, the provincial pooling system generated significantly less revenues for Saskatchewan than forecast (prior to its inception) by the government's consultants.

The F. F.M. C. is now using the terminology of "plant pooling" or "global species pooling" to describe the system of species pooling that is in eff'ect. However, regardless of the terminology, the system should result in fishermen delivering a like specie in a like form, of a like size, during the same period, being paid the same Transcona price. The only difference between the price paid should result from different freighting costs from the delivery point to the Winnipeg basing point.

Of greatest significance to this study is the fact that regardless of the negotiations between the Government of the N.W. T. and the F. F. M. C., the pooling system that has been applied to the N.W.T. has closely followed the system used in the other areas under the F. F.M. C. jurisdiction. Unlike Saskatchewan, we are of the opinion that the N.W. T. does not have sufficient influence to force a system on other provinces.

3. Comparative Advantages of Pooling Systems

Our assessment of the advantages to the N.W.T. of a system of provincial species pooling are as follows:

a. The system focuses attention directly upon the N.W.T. fishery. Inefficiencies in handling, processing and freezing, or selling of the product produced from N.W.T. fish will result in lower fish prices, or higher requirements for government support. As a result of this focusing of attention, we would expect that there would be strong pressure to correct inefficiencies.

b. The Government of the N.W.T. can be better assured that its subsidies are specifically in support of the N.W.T. fishery, as apposed to the fisheries of other provinces.

c. Under the condition whereby the products produced from N.W.T. fish are more profitable than those produced from fish of other areas, the fishermen will receive a higher price, or less government support will be required.

The major advantages of a system of species pooling are as follows:

a. The system better supports the goal of maximizing returns to all F. F.M.C. fishermen. In order to sell the total production of the fishery a range of products must be produced. These products vary as to profitability. Because the species pooling system results in the same payment to all fishermen, the system does not promote competition between provinces for the production of the most profitable products. As a result, management should be in a better position to plan production in a manner that will minimize costs .

A practical example of this would be the case of 4-9 northern pike. The major products produced fran the 4-9 northern pike are fillet blocks and whole frozen dressed. BOth are required in large volumes, but of the two the whole frozen dressed is more profitable. The Hay River Plant with its spiral freezer is in a very good position to freeze efficiently. The Transcona Plant has much greater, and more efficient filleting capacity than the Hay River Plant. The logical production plan would be to freeze at Hay River and fillet at Transcona. However, under a system of provincial species pooling, the province of Manitoba, if well informed, would demand that its northern pike be frozen rather than filleted. Presumably the Government of the N.W. T. would also demand that its northern pike be frozen. The conflict could result in a portion, or all of the N.W .T. northern pike being filleted at Hay River and the Manitoba northern pike being frozen at Transcona. This would increase costs of the total fishery and would result in a reduction in returns to all fishermen.

b. The system of species pooling is not as open to discrimination by the management or the Board of Directors of the F. F.M.C. As stated above, under provincial pooling, the magnitude of the net returns to the N.W. T. will be very dependent upon the product mix produced from the N.W.T. fish. Production of less profitable products would result in significantly lower returns to the N.W. T. At present, the F. F.M.C. is in control of production decisions. We strongly doubt that they would accept a system whereby the Government or fishermen of the N.W.T. were responsible for planning production. Furthermore, it would not be wise to change this system since no one in the N.W.T. has close enough contact with the markets to determine which products should be produced.

c. The system of species pooling 'results in a sharing of risk amongst the fishermen fishing that species. This should result in flattening peaks and valleys in fish prices and requirements for 90vernment support.

In the prior chapter we stated that since 1976 there has been a period when the N.W.T. would have profited from a species pool, and a period when it would have profited from a provincial species pool. A factor resulting in the improved position under regional species pooling was a change in the production plan for the Hay River Plant. As an employee of the F. F. M. C., and a consultant working both for the Government of the N.W.T. and the F. F. M. C., we were instumental in making this change to the production plan. However, it now appears to us, that the production plans for the Hay River Plant are roving in the direction of whole freezing a larger proportion of the product. This almost certainly would result in liner returns to the fishery on a provincial species pooling basis.

In summary, for the reasons stated above, we do not believe that the system of provincial species pooling would be beneficial in the long-term to the fishermen and the Government of the N.W.T.

4. Fishermen Pays The Freight

A general principle of pooling that has been in effect since the formation of the F .F.M.C. is that the f ishermen are responsible for freighting costs to the basing point (Transcona) . Freighting costs are not pooled. Why? ' We have never been able to determine a reason, other than that is the way it is. We surmise that the system was copied from the one used by the Canadian Wheat Board. In any case, the system has been accepted, and would be difficult if not impossible to change. Equalization of freighting

costs between fishermen has been left to provincial subsidy programs.

The question of how much freight should be paid by a fishermen delivering his catch to a processing plant other than Transcona is not as clear. The reader is probably aware that it costs less to ship frozen fish than fresh fish, and because of the yield loss even less to ship processed fish. It can be argued that under the conditions of species pooling no fisherman should gain or lose because they deliver to a processing plant as apposed to a packing station. We accept this argument. The reader will note that in our calculation of a species pool for 1981, we used the freighting costs that would have been incurred had the fish been shipped fresh to Winnipeg rather than the actual freighting costs.

C. POTENTIAL FOR GREATER RETURNS TO THE N.W.T. UNDER A SPECIES POOLING SYSTEM

In chapter II of this report, we listed a number of facts that were responsible for the clifferential of $169,000 in favour of regional species pooling for the year ended April 30, 1981. We believe that it is possible to make changes within the system of species pooling that would eliminate the ef feet of these factors. For example, the major factor creating the differential was the higher average selling price of fresh G. S .L. whitefish as apposed to whitefish from other lakes. As illustrated, the major factor resulting in this higher price was the fact that the G.S.L. whitefish sold fresh during the winter season when market demand was at a peak. This effect could be eliminated by *easing winter premiums.

As stated previously, further study will be required to determine all the factors involved, and potential for changing the ef feet of these factors without changing

the basic principles underlying the system of species poling.

D. THEORETICAL BASIS FOR GOVERNMENT SUPPORT OF THE FISHERY IN THE N.W.T.

Since 1975, the F. F.M.C. fishery has received support from each participating province, and the federal government. The type of support given has essentially fallen into three categories. These are:

1. Subsidization of fish prices;
2. Subsidization of operating costs;
3. Subsidization of capital expenditures;

The latter form of subsidization generally falls within the bounds of the federal department of Regional Economic Expansion, and is available to the fishery. In the N.W. T. grants have been approved through the Special ARDA program and through the GDA program. These programs are still available in support of any expansion that would be required.

The support of operating costs has taken two forms. The first is support of freighting costs. At present, freight subsudies programs are in ef feet in the provinces of Saskatchewan, Manitoba, and Ontario. In general, these programs attempt to offset the higher costs of freighting incurred by northern fishermen as apposed to their southern counterparts. The theory supporting this type of program, would essentially be the same theory that support federal equalization payments to various have-ret provinces. We believe that the programs have been successful in meeting their objective. However, we are apposed to blanket freight subsidy payments for one reason. Cur analysis in the province of Saskatchewan has indicated that where the program supports a species that cannot contribute anything towards its own support (negative contributed margin), the support paid is not retained by the fishery. It has been our experience that in this case the support does not increase the net income of fishermen. we

are of the opinion that if support is to be paid, it should be paid in such a manner as to cause the greatest increase to the net income of the f ishermen. Freighting subsidies in support of species with positive contributed margins will maximize net incomes of the fishermen. Freighting subsidies in support of species with negative contributed margins will not. At this point there are no species fished in the N.W. T. that have negative contributed margins.

The second type of cost subsidization, is the 'subsidization of operating costs. This form has mainly been employed by the DIAND in subsidization of northern processing plants and packing stations. In our option, these programs have not been successful. This opinion is supported by the fact that the two major processing plants that have been subsudi' Zed in this manner are now non-operative. A factor resulting in the discontinuance of the programs was the suspicion on the part of the DIAND that the total of its subsidy payment was not remaining in the region that it was intended to support.

The Government of the N.W.T. has been supporting the G.S .L. fishery since 1976. Although the program has included a segment in support of freighting and operating costs, essentially since its inception the program has been in support of fish prices. Although the program has had its deficiencyS, it is our opinion that in general the program can be termed a moderate success. The purpose of the N.W. T. price support program was to support the fishery on G.S.L. over a period when returns from the marketplace were not adequate to guarantee that the fishery would be self-sufficient. We believe that this has been accomplished. Since 1976 the support paid by the Government of the N.W.T. has varied on an annual basis from a low of approximately $40,000 to a high of approximately $150,000. During the same period the fishery has returned gross annual payments to f ishermen in the order of $1,000,000 to $1,400,000. Our analysis indicates that fishermen during this same period have earned moderate to reason-

able net incomes. Furthermore, the gathering and processing activities of the Hay River Fish Plant are now resulting in local expendi" tures of in excess of $800,000 per year. We will leave it to the reader to determine the multiplier effect of these expenditures upon the local economy.

From the stand point of assisting the fishery to obtain a degree of self-sufficiency, we also believe that the program has been partically successful. Specifically in the case of inconnu, if it were not for the price support program it is unlikely that the specie would not be fished today. However, the program supported inconnu until the market took over, and as a result today the specie is self-sufficient. On an overall basis, our analysis in previous chapters, indicate that specific returns from the N.W.T. fishery improved over the period of 1976 - 1981. In fact, in 1981 on a provincial species pooling basis, the fishery could be considered to be self-sufficient.

In our opinion, there have been two major deficiencies in the program to date'.' The first is its almost exclusive support of the summer fishery. As previously stated this support has been counter-productive by encouraging f ishermen to fish the summer season as apposed to the more profitable (to the total f ishery) winter season. The second, is the almost adversary relationship that has developed between the fishermen, the F. F.M.C. , and the @Vernment of the N.W.T. We believe that the adversary relationship has developed not because of the support per se, but because of the following factors:

a. There has keen no general basis established for the support program
b. Negotiations for the support program on an annual basis commence too close to the commencement of the fishing season, and generally after prices in other provinces have already been set.
c. The agreements have not included an audit provision

The latter two points can be easily rectified. The F. F.M.C. should be in a position to make its request for support by April 1 each year. The support agreements should be finalized before approval of prices by the F. F.M.C. Board of Directors. A provision for annual audit, even if it was not exercised, and should remove some of the mistrust from the review and payment precess.

We do not approve of price support programs that perpetuate themselves. We believe that the program should be designed to assist the fishery over hard tires and help to improve its own lot. However, this does not negate the necessity for establishing a foundation on which support can be built when it is required. We believe that the principles for the support program should be established and documented, but there should be a mechanism to change these principles when changing conditions demand a change.

The principles that we would recommend are as follows:

1. The support program should be in support of fishermen's prices, not operating costs. An exception could be made for a program of freighting subsidies provided that the program was subject to periodic review to ensure that it was assisting in the objective of maximizing fishermen's net incomes .
2. The program would be in support of a system of species pooling. However, the system should be monitored on a regular basis (possibly every second year) to ensure that the returns to the N.W.T. from a species pool were not significantly lower than they would be under the conditions of a provincial pool. If monitoring determined that this was the case, there would be no adjustment to the current year, but rather adjustments would be negotiated for future years.
3. The program should support practices that will result in the f ishery maximizing its economic returns. For example, the program should support winter fishing as long as increased winter volumes will increase the profitability of the fishery

E. CONCLUSION

From our analysis in this chapter we conclude the following:

1. A system of provincial species pooling cannot work in the long-term to the benefit of the N.W.T. fishery.
2. Provided that the N.W. T. fishery remains within the F. F.M. C. jurisdiction, then it should follow a system of species pooling. However, additional analysis should be performed to determine ways in which the system of species pooling may be modif ied to generate more equitable terms to the N.W. T. A major factor that should be considered is an increase in winter premiums on export whitefish.

YEAR	AMOUNT
1983	$300,000
1984	$415,000
1985	$625,000

However, the reader will recall that in previous chapters we stated that the price to fishermen for last summer was just slightly higher than what was required for the fishermen to breakeven. Therefore, in addition to the amounts projected above, we believe that the f ishermen will require increases in payments to them at a level that will at least compensate for inflationary increases in their costs. The minimum increase that we project would be in the order of $100,000 psr annum after 1983.

We believe that the direction of these projections is correct, but the magnitude is too extreme. If the projections were correct, the fishery would not only be in deep trouble in the N. W. T., but throughout the North. We believe that the F. F.M. C. would have to react with drastic measures, including a potential production quota system for whitefish.

To reiterate, we are confident that unless major changes are introduced, the fishery in the N.W.T. is facing hard times. However, we have not performed sufficient work, particularly in the area o'f marketing, to accurately forecast how hard these tires are likely to be.

B. MARKET TRENDS

In previous chapters we have presented tables of historical sales of fresh whitefish. In tables 12 and 13, we present a summary of historical sales by year for the major products produced fran G.S.L.

The reader should note that there has been very little growth in the selling price of whitefish and trout products . Pickerel., northern pike, and inconnu have faired quite well. However, the volume of production of these species for the N.W.T. is small in comparison to the other two. Furthermore, we understand that pickerel. is now having problems in the marketplace.

C. PROJECTIONS OF REQUIRED SUBSIDIES, STATEMENT OF ASSUMPTIONS

Our assumptions supporting the projected requirements for government subsidies listed in the overview to this chapter are as follows:

1. Species pooling
2. Average annual volume of catch delivered equal to 2,800,000 pounds delivered weight.
3. Annual increases in selling price as listed below:

Species	Price Increase
Export whitefish	NIL
Smoker whitefish	NIL
Trout	2%
Northern pike	5%
Pickerel	7%
Inconnu	10%

TABLE 13

SCHEDULE OF FRESH SALES BY F. F.M.C. OF

MAJOR SPECIES PRODUCED @J GREAT SLAVE LAKE

YEARS ENDED APRIL 30, 1979 - 82

	Northern Pike						Trout			Halls			Inconnu		
	Hdls.			Dsd. 4-8			Dsd. 4-8								
	lb.	$/lb.	$	lb.	$/lb.	$	lb.	$/lb.	$	lb.	$/lb.	$	lb.	$/lb.	$
2 (to Feb.)	344	.84	289				102	.91	93	3	1.33	4	3	1*12	4
1	515	.77	397				255	.98	251	4	1.21	5	25	1.20	30
0	718	.71	510				213	.96	204	25	1.12	28	98	.67	66
9	690	.61	423				171	.91	155	7	1.00	7	51	.59	30