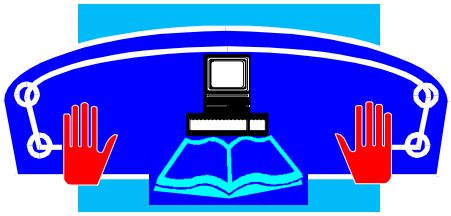

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Synthesis and Analysis

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Introduction

In the course of evaluating NWT fisheries, we identified a number of factors and critical issues that contribute to the success or failure of fisheries development. Using these criteria we have evaluated each of the NWT fisheries and the results are briefly explained below. Those criteria that are positive for each fishery contribute to their success. Those that are negative are issues that should be addressed in the Fisheries Strategy.

Planning

Planning Issues	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keawatin Char	Baffin Char	Baffin Turbot
Clear Consistent Goals and Objectives	No	Yes	Yes	No	No	No
Part of Larger Regional Economic Dev. Plan	No	?	No	No	No	No

Clear, Consistent Goals and Objectives

The GNWT has a number of different goals for economic development initiatives but, at least in the case of fisheries development, these goals are not clearly articulated or assessed for potential conflict, complementarily, or degree of priority, particularly with respect to the relative balance between industry profitability and job maintenance/creation. In addition, the role of government in fisheries development is not clearly defined. As a result, there are few clear guidelines to direct government in its fisheries support and investment, thus conflicts arise over what type of government support should be provided, what level of support the government should provide, and who should receive support.

The fish freight subsidy provides an example of these problems. The subsidy was

instituted as a temporary measure to help defray costs in the Great Slave Lake fishery during a market slump. However, subsidy requirements continue to increase each year. Because ED&T lacks a clear definition of its role in this fishery there are no guidelines with respect to how much subsidy should be provided and who should receive the subsidy, therefore the subsidy is paid on every kilogram of fish harvested. As a result, the subsidy is provided to fishermen who do not harvest enough fish to be economically viable, which encourages economic inefficiency in the fishery. In addition, the lack of clear objectives and criteria for the subsidy program has led to conflict over the application of the subsidy to new fisheries (e.g. Pangnirtung turbot fishery).

Moreover, most government support for NWT fisheries has been based on a desire to provide job opportunities for local residents and because this broad goal has not been more specifically defined (i. e. at what cost? how will employment/benefits be distributed? how will government support employment creation/viability?) most fisheries have evolved into a state where too many fishermen participate in a fishery providing limited benefits. Consequently, revenues earned by each fisherman are too low to cover costs and provide a reasonable income. Is this an appropriate form of job creation?

Only two of the fisheries, Mackenzie Delta and Cambridge Bay, appear to have very clear, specific objectives. The Mackenzie Delta fishery was initiated to provide a source of cash income to HTA members who wished to remain on the land throughout the year. In pursuit of this goal, a test fishery was set up with five very specific objectives.

In the case of Cambridge Bay, the Co-op runs the fishery as a business venture with the ultimate aim of earning a profit and providing dividends to its shareholders, both of which have been achieved.

Part of a Larger Integrated Regional Economic Development Plan

The NWT also suffers from a general lack of integrated regional planning in which all sectors are evaluated on a comparative basis. As a result, none of the NWT fisheries

have been planned within the context of an overall regional plan. There are “in-house” ED&T plans for each region but these deal only with the renewable resource sectors, or specifically with fisheries, and do not compare costs and benefits - “bang for buck” - of fisheries development relative to alternative developments.

Resource Issues

Resource Issues	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Realistic Assessment of Biological Resources	Yes	Yes	Yes	No	No	No
Adequate Fish Supply for Commercial Fishery	Yes	No	Yes	No	?	Yes
Conflict with domestic fishery	No	7	No	Yes	Yes	No

Realistic Assessment of Biological Resource

The Great Slave Lake fishery has a long history of sustained harvest and known stock biology. Whitefish populations are believed to be healthy, inconnu are somewhat weak and trout stocks were at one time threatened but are now rebuilding. Current quota allocations are believed to be sustainable. Harvests have fluctuated over the past ten years but this has been in response to market conditions rather than unstable catch per unit effort.

The Mackenzie Delta fishery is a test fishery project designed to determine a sustainable level of harvest. Based on the information collected during the course of this project, a biologically sustainable commercial quota is expected to be assigned to this fishery.

The Cambridge Bay fishery harvests char from a number of different rivers near the community and biological analysis and review conducted by DFO in 1992 indicated that stocks have not experienced any ill effects from harvesting. Catches have also been fairly consistent and daily fish counts are carried out for analysis by DFO. Thus, stocks appear

to be healthy and the commercial quota assessment sustainable,

Very little however, is known about the biology or resource status of the Keewatin char stocks. Most Keewatin quotas were set in the mid-70s on a "best guess" basis with very little scientific research carried out - indeed, in most cases it is not even known where the char travel or how many stocks are present. In addition, domestic and commercial fishing take place on the same rivers but the level of domestic harvest is uncontrolled and unknown, thus it is extremely difficult to set realistic quotas that take into account both commercial and domestic harvests. This has led to problems in the Keewatin where harvests have dropped dramatically over the past two years and there is serious concern about the viability of the resource. Baffin char is in much the same situation, with very little scientific data available about the resource.

In the case of the Baffin turbot fishery, the fishery resource is not well understood. Regional DFO representatives believe that established quotas are well within accepted limits for sustained use - although it appears that too many female turbot are being caught. DFO headquarters on the other hand, believe that the Baffin stock is not a resident turbot stock but rather part of a larger Davis Strait stock which has a number of other licenced harvesters. Thus, any increase in Pangnirtung harvesting would impact on the overall Davis stock. DFO is planning to undertake a number of biological studies to clarify these issues.

Adequate Fish Supply for Commercial Fishery

Both the Great Slave Lake and Cambridge Bay fisheries have adequate quotas to sustain a commercial fishery as evidenced by their long standing participation and success in commercial markets.

The Mackenzie Delta Fishery is operating with a commercial test quota that is too small for commercial viability given low southern market prices for whitefish and high costs of transporting fish out of the region.

The Keewatin Char Fishery has experienced low harvests during the past two years and suspicions are that the char resource has declined to dangerously low levels. If this is the case, it may be necessary to stop commercial char fishing in the region altogether.

The Baffin char resource is virtually unknown, therefore it is difficult to say whether the resource is adequate to sustain both commercial activity at an economic level and subsistence fishing. The impact of commercial fishing in the Keewatin should serve as a warning to the Baffin fishery.

The Baffin turbot fishery has been allocated half of the potential commercial turbot quota for the area and at that level has adequate resources to pursue commercial fishing. If the entire quota is granted to the fishery, the economics of the fishery would likely improve even further.

Conflict with Domestic Fishery

Conflict with domestic fishing is not an issue in the Great Slave Lake fishery.

In the Mackenzie Delta test fishery, commercial harvesting takes place on the same river system as domestic fishing and the size of the resource and level of domestic harvest are unknown. Previous attempts at commercial fishing in the Delta raised concern over the impact on domestic fishing, therefore DFO has been very conservative in granting a test fishery quota. Test fishery requirements include collection of biological information to help determine a sustainable level of commercial harvest. At present there are no quotas on domestic harvest or Total Allowable Catch quotas in place.

In contrast, Cambridge Bay has access to a large number of char rivers and domestic and commercial fishing are geographically separated from each other. The HTA allocates commercial fishing licenses and there is a high level of cooperation between the Co-op and HTA in assigning areas for commercial fishing development therefore there has been no conflict between commercial and domestic fishermen.

The commercial char fisheries in the Keewatin however, are prosecuted on the same rivers and frequently at the same time as domestic char fishing. The level of domestic harvest is unknown and unregulated and, because domestic fishing is carried out in close proximity to rapidly growing communities, domestic pressure is almost certainly increasing. Increased domestic harvest combined with commercial harvesting has resulted in the collapse of at least one char stock in the Keewatin (the Diana River) and probably several others. Results of the 1992 and 1993 char harvests indicate that major stocks throughout the southern Keewatin region may have crashed due to over-exploitation.

Baffin char is also commercially harvested from the same river systems as domestic char. Little is known about the Baffin char stocks, therefore the problems experienced in the Keewatin should serve as a warning.

With regard to the Baffin turbot harvest, turbot is not harvested for subsistence use, therefore there is no conflict between commercial and domestic harvests.

Markets

Market Issues	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Adequate Markets	No	No	Yes	Yes	Yes	Yes
Access to Market	Good	Poor	Poor	Good	Good	Good

Adequate Markets

The two fisheries that rely primarily on the whitefish market, Great Slave Lake and the Mackenzie Delta, are facing declining markets, declining prices and increased competition. Current market conditions do not provide revenues high enough to cover the cost of present operations therefore new market niches must be found for these fisheries and fishing costs must be reduced if commercial fishing is to be economically

viable.

The market for char fisheries (Cambridge Bay, Keewatin Char and Baffin Char) is underdeveloped but is projected to be large enough to absorb NWT production if quality and consistency of supply is improved. The price for char is declining and is expected to continue to fall over the next several years because of a large market glut of salmon, therefore char fisheries should focus on decreasing costs, increasing quality, resolving marketing responsibilities and market penetration strategies if they are to remain viable.

The market for turbot is strong and growing and price is expected to increase. In addition, competition is limited during the winter months resulting in high market acceptance and a good price for Baffin turbot. Once competing turbot fisheries start up in the spring, prices drop making it difficult for Baffin turbot to compete. Therefore there is good market potential for Baffin turbot but it is limited by this seasonal window unless Baffin costs of production can be reduced substantially.

Access to Markets

The Great Slave Lake fishery has good access to southern markets through FFMC. Access to local northern markets is limited but currently being investigated. Access to local markets could be improved as a means of increasing prices to the fishermen.

The Mackenzie Delta Fishery has poor access to markets. The long distance and high price of transportation makes it extremely difficult to sell Delta fish in southern markets. Local domestic markets are extremely limited due to small population and high participation in domestic fisheries. Alternative markets in the NWT and Yukon are under investigation and this research should be supported and encouraged.

The Keewatin and Baffin char fisheries have good access to markets through marketing efforts of the NWT DevCorp. On the other hand, the Cambridge Bay Char fishery lost its access to market when the exemption from FFMC was negotiated for NWT char. The

Cambridge Bay Co-op fishery does not benefit from the marketing efforts of the NWT DevCorp and is currently facing difficulties marketing its char.

The Baffin turbot fishery has good access to the market through the NWT DevCorp. Access to the market is enhanced by good transportation connections between the Baffin and southern Canada.

Management

Management Issues	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Effective Management	Yes	Yes	Yes	?	Yes	Yes
Participatory Management	Medium	High	High	Low	Medium	Medium
Level of Co-ordination	High	High	Low	Low	Low	Low
Management and Board Training Required	Yes	Yes	No	Yes	Yes	Yes

Management

If effective fishery management means that historical fishery harvest levels have been kept well within allowable commercial quotas, no serious threat has occurred to the domestic harvest, local people have been employed and earned income, and generally there has been at least some growth in production and revenues, then we can say that with the exception of the Keewatin Fishery (where harvest levels have fallen dramatically and domestic fisheries in the South Keewatin may be threatened) all NWT fisheries have been effectively managed.

Participatory Management

Participatory management means the effective involvement and control over fishery management by local people. The range of control can vary considerably.

In the case of the Great Slave Lake fishery, where an Advisory Committee exists, there is some degree of stakeholder input and control over fishery management - although the Committee does not have the final say in who will be licensed or not licensed, how the fishery will operate, and who will market fish products.

In the case of the Mackenzie Delta fishery, where a local development corporation (Ummaarmiut Development Corporation) operates the fishery, and where a regional steering committee oversees fishery bookkeeping, the plant manager and marketing, there is still greater participatory management by local people .

This is also true of the Cambridge Bay fishery where the local Co-op (Ikaluktutiak Co-op) manages all facets of the fishery with minimal government involvement.

However, because there is no organized local or regional group overseeing the Keewatin fishery, participatory management in the fishery is very low. Indeed, attempts to form a group have always failed - in part because the fishery is spread out among many different communities throughout the region. The exception is in Arviat where a local owner has operated a fish plant (now jointly owned with the DevCorp), but the fish plant has recently failed and is likely to out of business.

In regards to the Pangnirtung Fisheries, we can say that a degree of participatory management exists because local community residents sit on the board and have 49°/0 ownership of Pangnirtung Fisheries but the NWT DevCorp has majority ownership of Pangnirtung Fisheries and makes all day-to-day management decisions.

Level of Coordination

Effective fishery coordination means there is a mechanism that allows all stakeholders to regularly meet, discuss issues related to fishery management and development, set long term goals and resolve conflicts. However there is effective coordination in only two NWT fisheries: Great Slave Lake where the Advisory Committee serves as a useful

coordinating mechanism; and the Mackenzie Delta fishery where the steering committee serves as a useful coordinating mechanism. In all other fisheries this is not the case. In the Keewatin there is no steering committee or effective advisory committee - only the EDA Fishery Regional Management Sub-Committee which, significantly, does not include the DevCorp, a major player in fishery development in the area. Likewise there is only an EDA Fishery Regional Management Committee in the Cambridge Bay and Pangnirtung fisheries, and in both cases the DevCorp is excluded as a major player, In the case of Cambridge Bay, the local Co-op - the most important player - is excluded.

Management and Board of Directors Training

Although skill training for fishermen is often provided in a fishery there is almost no management or board of directors training provided so, although communities are often encouraged to take on more fishery management responsibility, there is in real terms, little back-up support provided to effectively take on new management roles and responsibilities. This has almost always been the case in NWT fishery development. The exception is with the Cambridge Bay fishery where Co-op management training and Co-op board of directors training has been provided over a number of years.

Appropriate Technology

Appropriate Technology issues	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Appropriate Plant infrastructure	No	No	No	No	Yes	Yes
Harvesting Technology	Too much	OK	OK	Too much	?	?
Opportunities for New Technology - Harvesting	No	No	Yes	Yes	Yes	Yes
Opportunities for New Technology - Processing	Limited	Limited	Limited	Limited	Medium	Low
Harvesting/Processing Training Required	Yes	Yes	'r'es	Yes·	Yes	Yes

Appropriate Plant Infrastructure

The Great Slave Lake fishery is served by packing plants at Wool Bay, Moraine Bay and Hay River. The Wool Bay plant needs to be rebuilt or replaced and the Hay River plant, originally designed as a processing plant, is over-sized and currently sewing only as a packing plant. In addition, if the local processing/marketing initiative being tested in the Hay River plant should prove successful, processing facilities would be required.

The Mackenzie Delta fishery has been operating its test fishery project out of an old building. If the fishery is permanently established, an appropriate packing facility would be required.

The Cambridge Bay char fishery is operating out of the original fish processing plant. This plant requires renovation or replacement in the near future if it is to continue meeting DFO export requirements.

The Keewatin char fishery currently uses four separate packing/processing facilities in four different communities making processing costs extremely high. The DevCorp will be making a large capital investment in a meat and fish plant in Rankin Inlet that could be used as a central processing facility thus reducing fish processing costs.

The Baffin char and turbot fisheries will have a new, state of the art, DevCorp financed fish processing facility in Pangnirtung. The facility should provide the necessary processing infrastructure into the foreseeable future.

Harvesting Technology

The Great Slave Lake fishery is highly overcapitalized in the harvesting sector. Too many fishermen make it very difficult for any of the participants to earn a positive net revenue and fishermen are unable to replace their equipment through fishery earnings. Reducing

the number of fishermen would increase the efficiency of the fishery and increase the returns to each participant.

The level of harvesting technology in the Mackenzie Delta and Cambridge Bay fisheries seem to be appropriate. A small, controlled number of fishermen harvest the catch such that revenues are high enough to cover costs and provide a wage.

On the other hand the Keewatin char fishery is highly overcapitalized. A large number of participants, each using their own equipment, harvest a small amount of char resulting in low returns for most participants. In 1993, fishermen's costs far exceeded the income from fishing and no profits were generated.

There is little known about the level and amount of equipment used in the Baffin char fishery, however data reported by ED&T suggest that a large number of fishermen participate in the char fishery, therefore it is likely that the Baffin char fishery is as equally over-capitalized as the Keewatin char fishery.

Because the Baffin turbot fishery is a new fishery there is little data available on the level of capital investment in the harvesting sector, however the number of fishermen attracted to the fishery has increased dramatically over the past four years, including fishermen from other communities, therefore there is a good chance that without some form of limited entry this fishery will become overcapitalized in the harvesting sector.

Opportunities for New Technology - Harvesting Sector

Fishermen in Great Slave Lake currently harvest whitefish with gill nets which results in a lower quality product than fish caught in trap nets. Trap nets and other alternative harvesting techniques have been tested in Great Slave Lake without success. Trap nets have also been tried without success in the Mackenzie Delta fishery. Therefore it appears that gill nets remain the most appropriate technology to use in these fisheries at present.

The Cambridge Bay Char fishery uses a combination of gill nets and weirs to harvest char. Weir fishing provides a higher quality product because the fish are kept alive until they can be shipped out, the weir allows for selective harvesting, and the final product is not marred by net marks or bruising. There has also been some experimentation with holding char under the ice until they are harvested, thus extending the season and also providing fresh, unmarked product. Because of the extreme importance of quality in the char market, the potential uses and adaptations of weir technology and fish holding should be further investigated and pursued. These technologies may be applicable to the char fisheries in the Keewatin and Baffin as well.

There is limited opportunity for the introduction of new harvesting technologies in the Baffin turbot fishery, in particular power haulers, but it is unknown whether the increased cost of power haulers is justified through increased catch per unit effort.

Opportunities for New Technology - Processing Sector

Opportunities for new processing technologies in Great Slave Lake and the Mackenzie Delta are limited because whitefish does not lend itself well to value-added products such as fish sticks, fish nuggets, fish cakes etc. If whitefish could be made into processed fish products, these products would have to compete with lower priced rough fish such as pollock, hake, whiting etc. There is a market for whitefish fillets, but fillets are difficult to produce because they require pinboning which must be done by hand or by very expensive high-tech laser equipment. There may be local market opportunities for fillets and smoked portions where economies of scale are less critical.

Opportunities for value-added processing for char are limited by the fact that only a portion of the catch is suitable for smoking because smoking requires high quality fish without net marks, consistent deep red colour, and consistent size. It is also inappropriate to use char for products such as canning, fish sticks, fish cakes etc. because of its high market value. In addition, the market for char is not yet firmly established, therefore most dealers feel that value-added char products would be premature. The

same market problems that plague whole char (competition with low price salmon) will also affect value added char making it difficult to market high priced value-added products. Therefore, the cost/benefit ratio of value added processing needs to be shown before major investment in value-added processing is made. With the introduction of the new fish plant in the Baffin, some value-added processing that takes advantage of limited economies of scale could be carried out.

The main product form demanded by the North American turbot market is fillets and the Pangnirtung fish plant is already processing turbot fillets. There is little opportunity to sell other value added turbot products.

Harvesting/Processing Training Required

If additional value-added processing is pursued in any of the fisheries, appropriate training in filleting and processing would be required. In addition, navigation training needs have been identified for Great Slave Lake and DFO has begun this training. Keewatin and Baffin char fishermen also need training in fish handling to improve quality.

Monitoring and Evaluation

Monitoring and Evaluation Issues	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Cost and Earnings Info Requirements	Update	Needed	Needed	Update	Needed	Update
Employment and Income Info Requirements	Update	Update	Needed	Update	Needed	Update
Stakeholder Surveys	Update	Update	Update	Update	Update	Update

Cost and Earnings Data Requirements/Employment and Income Data Requirements

Only one NWT fishery, Great Slave Lake, has had a comprehensive cost and earnings study completed in the last five years. Cost and earnings information has been collected on a more limited basis for the Pangnirtung turbot fishery and a Keewatin cost and earnings study was also carried out for Arviat and Whale Cove in 1988 but is now out of date. Cost and earnings studies must be done on a regular basis to provide valid data, therefore these studies should be updated and comprehensive cost and earnings studies should be done for the other fisheries.

Income and employment data is scarce for most NWT fisheries and there is little data available on the proportion of individual income that comes from fishing, or the importance of fishing income relative to other sources of total community income. Employment and income data is required to evaluate the benefits received from the fishery and the role of commercial fishing in regional and community development.

Stakeholder Surveys Required

Stakeholder surveys should be undertaken on a regular basis to determine what direction stakeholders think fisheries development should take and to help set priorities. To date, no stakeholder surveys have been completed.

Access to Funds

Access to Funds	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Access to ED&T Fish Freight Subsidy	High	Low	High	High	High	Low
Access to BDF	Low	Low	Low	Low	Low	Low
Access to current EDA	Low	High	Low	High	High	High
Access to Debt Capital	Low	Low	Low	Low	Low	Low
DevCorp Investment	None	None	None	High	High	High

Access to ED&T Fish Freight Subsidy

Not all NWT fisheries have equal access to the Department of Economic Development's Fish Freight Subsidy. For example, the program provides a freight subsidy for white fish and arctic char to points south - a policy that benefits fisheries exporting arctic char and white fish to southern markets - but only provides finding to Pangnirtung for turbot shipped from Pangnirtung to Iqaluit and not to southern destinations. Thus, the Pangnirtung turbot fishery, one of the more efficient fisheries - and for government one of the fisheries that generates a higher return on government investment - is discriminated against in terms of freight subsidy support.

Access to Business Development Fund (BDF)

Commercial fisheries in the NWT seldom access conventional business support programs such as the Business Development Fund (BDF). Indeed, since 1991 only $423,140 from the program has been issued to commercial fisheries projects. The primary reason for the lack of support is that NWT commercial fishermen can seldom meet program tests of viability or equity requirements. Thus, we can safely say that programs like the BDF are difficult to access for most NWT fisheries.

Access to Current EDA

The largest percentage of the EDA fisheries budget is allocated to test fisheries with most of the finding targeted to the Baffin and Keewatin regions and to a lesser extent Inuvik region. Thus, other regions, including those with opportunity for expansion and infrastructure needs (e.g. Kitikmeot) cannot access EDA funds to the extent that other regions can.

Access to Debt Capital

Commercial fishermen have difficulty accessing debt capital including loans offered under the Business Credit Corporation (BCC) - an agency that is to serve as a "lender of last resort". Indeed, since 1991 only three loans (a total of $1 20,000) have been provided to commercial fishermen under the BCC. Like the BDF, the prime reason that commercial fishermen cannot access the BCC is because they often cannot meet program tests of viability and equity.

Access to DevCorp Investment

The DevCorp has invested in only two fish plants in the NWT (Pangnirtung and Rankin Inlet), as of 1993 a total of $2.8 million. Based on a recent Auditor General's report, the DevCorp plans on investing further funds in the two fisheries. Total investment in Pangnirtung fisheries alone, including funds already invested, will total $6.6 million in capital and operating subsidies. The prime concern with DevCorp investments is that investment is concentrated in only two fisheries with no strategic plan for other fishery investments.

Benefits

Benefits	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char	Baffin Turbot
Total Net Income	$887,918	$105,359	$296,127	$331,492	$383,927	$553,534
Number of Participants	109	30	70	162	160	210
Average Net Income	$8,146	$3,511	$4,230	$2,046	$2,399	$2,635
Self-Reliance	Medium	Medium	High	Low	Medium	Medium

Total Net Income

Total benefits include all net income earned plus government assistance. Based on this figure the Great Slave Lake fishery generates the greatest total benefit ($887,9 18) and the Mackenzie Delta fishery the lowest total benefit ($105,359).

Participants

Fisheries participants include fishermen, fishermen helpers, plant workers and plant management. Based on this definition, the Baffin Turbot fishery has the greatest number of participants (210) and the Mackenzie Delta fishery the lowest number of participants (30).

Average Net Income

Among the fisheries, the Great Slave Lake fishery generates the highest per capita average net income ($8, 146) which is understandable since the fishery operates in both summer and winter. The Keewatin fishery generates the lowest average net income which is also understandable given the fishery's low gross income level and high number of participants.

Self-Reliance

Self-reliance can be measured against two variables: the extent of local participatory management in a fishery; and need for outside government investment in a fishery. Using these two measures we can say that the Keewatin fishery has low self reliance (because there is low participatory management yet high government investment in the fishery) while the reverse is true for the Cambridge Bay fishery (where participatory management is high and government investment is low). Other fisheries can generally be measured as having medium self-reliance because on both measures (participatory management and government investment) the fisheries fall, more or less, mid-point.

Economic Performance

Economic Performance	Great Slave Lake	Mackenzie Delta	Cambridge Bay Char	Keewatin Char	Baffin Char*	Baffin Turbot
Total Revenues	$1.8 million	$30,948	$430,862	$325,578	$448,527	$1 million
Govt $/Market Value	1:2.7	1:0.2	1:6.5	1:1.7	1:3.9	1:2.1
Govt $/Total Benefits	1:1.3	1:0.7	1:4.5	1:1.7	1:3.3	1:1.1
Economic Outlook	Decline	Stable	Growth	Decline	Growth	Growth

*Baffin Char values assume char is exported or sold at export prices.

Revenues

The Great Slave Lake fishery has the highest gross revenue ($1.8 million), followed in descending order by Baffin Turbot fishery ($1 million), Baffin Char fishery ($448,522), Cambridge Bay fishery ($430,862) and Mackenzie Delta fishery ($30,948).

Government Investment to Market Revenues Ratio

The Cambridge Bay fishery has the highest ratio of government investment to market revenues ratio ($6. 50 for every $1.00 of government investment) followed in descending order by Baffin Char ($3.90), Great Slave Lake ($2.70), Baffin Turbot ($2. 10), Keewatin Char ($1 .70) and Mackenzie Delta (20 cents).

Government Investment to Benefits Ratio

Likewise the Cambridge Bay fishery has the highest ratio of government investment to benefits ratio ($4. 50 in local income for every $1.00 of government investment) followed in descending order by Baffin Char ($3.30) , Keewatin Char ($1.70), Great Slave Lake ($1 .30), Baffin Turbot ($1.10), and Mackenzie Delta (70 cents).

Fishery Economic Outlook

Based on available market information, available supply, fishery organization and management, and fishery economic performance to date, we can project the economic outlook for the fisheries for the future. In the case of the Great Slave Lake fishery we can say that because whitefish markets and prices are likely to decline the fishery will likely require a higher level of subsidy, thus the picture for the fishery is one of decline.

In regards to the Keewatin fishery, we can conclude that the economic outlook for the fishery is also one of decline because fish harvests in the South Keewatin have fallen, the level of government subsidy has been relatively high and the fishery is poorly organized.

However, in regards to the Mackenzie Delta fishery, we can say that because the fishery is well organized and there is possibly some opportunity to develop alternative markets, the high level of government investment can be balanced with some small optimism, thus we can say the economic outlook for the fishery is stable however the returns to the fishery will remain extremely low.

Only in three fisheries can we forecast growth. In the Cambridge Bay fishery there is definite potential for growth assuming the Co-op receives marketing assistance, There is also potential for growth in the Baffin char and turbot fisheries because in both fisheries market potential is good to excellent, government investment generates relatively high market revenues and benefits, there is strong community support for the fishery, and effective management exists in the form of the DevCorp - owned Pangnirtung Fisheries.

Summary

The factors contibuting to the success or failure of each fishery can be summarized as follows:

Fishery	Fishery Success Factors	Fishery Failure Factors
Great Slave Lake	Adequate Commercial Quota	Lack of Clear Goals
	Good Access to Market	Low and Declining Fish Price
	Well Known Resource	Declining Market
	Participatory Management	Over capitalized Harvesting Sector
	Co-ordinated Management	resulting in low average incomes.
Mackenzie Delta	Co-ordinated Management	Quota too small
	Clear Goals and Objectives	Low and Declining Fish Price
	Strong Community Support	Declining Market
		High Export Costs
		High Processing Costs
Cambridge Bay Char	Clear Goals and Objectives	Declining Price
	Goad Potential Market	Poor Access to Market
	Adequate Resource & Quota	Conflicts with DevCorp
	Effective Management	
	Strong Community Support	
	Efficient Harvesting	
	Strong Local Control	
Keewatin Char	Good Potential Market	Conflict with Domestic Fishing
	Good Access to Market	Resource Sustainability Concerns
	through DevCorp	Poor coordination
		High dependency on Govt.
		High costs-infrastructure/transport
Baffin Char	Good Potential Markets	Resource Unknown
	Good Access to Markets through DevCorp	Potential Conflict with Domestic Fishery
	Plant infrastructure in Place	
Baffin Turbot	Strong, Increasing Market	High Costs relative to competition
	Increasing Price	Unknown resource
	Seasonal Price Advantage	
	Plant Infrastructure in Place	
	Strong Local Support	
	Good Access to Market	
	Some Participatory Mgt	
	Large Available Quota	