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INTEGRATED SMELT FISHERY MANAGEMENT PLAN

EASTERN NEW BRUNSWICK AREA
GULF REGION

2007–2011

Canada

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GLOSSARY

Coastal fisher: Designates a fisher who is not a member of a core enterprise and who holds at least one key non-vessel-based commercial fishing licence. In the Eastern New Brunswick Area, key non-vessel-based commercial licences are for the following species: clams (bar clams, bay quahogs and soft-shell clams), eel, gaspereau, oyster and smelt.

Core enterprise: Means a fishing unit composed of a fisher (head of enterprise), one or more registered vessel(s) and the licences he or she holds, and which has been designated as such in 1996 under the following criteria:

For bonafide fishers: who have bonafide fisher status and hold a key fishing licence (snow crab, Category A lobster, groundfish (all gear other than handline), scallop, tuna or herring).

For non-bonafide fishers: who hold two key fishing licences (shrimp, snow crab, Category A lobster and ITQ groundfish only) or who hold one key fishing licence, have fished for a full season and have made landings with a value of at least $25,000 under their own licences, for two years between 1993, 1994 and 1995.

Ecosystem: Basic ecological unit formed by the natural environment and the organisms, animals and plants that live there.

Integrated Fisheries Management Plans: Aimed at conservation and sustainable use of fisheries resources. Plans incorporate conservation, management and scientific requirements for a fishery and also spell out the process and implementation of resource management, conservation and protection measures. The process provides the basis for a more integrated approach between DFO sectors as well as for a more meaningful participation of all stakeholders. Integrated Fisheries Management Plans in effect set the stage for co-management arrangements by ensuring transparency, establishing overall allocations between sectors and fleets, providing relevant contextual information and ensuring that clients and stakeholders are consulted on the overall goals and strategies for the management of each fishery.

Watershed: Geographic concept designating a territory whose land is drained by any one body of water, such as a bay (Caraquet Bay watershed) or a river (Aboujagane River watershed), and which includes groundwater, surface water and wetlands.

INTEGRATED SMELT FISHERY MANAGEMENT PLAN

Eastern New Brunswick Area

2007–2011

INTRODUCTION

This management plan covers the commercial smelt (*Osmerus mordax*) fishery in the Eastern New Brunswick Area, including watersheds between Dalhousie and Baie Verte (Appendix 1) or statistical districts 63 to 80 (Appendix 2) for the period 2007 to 2011 inclusive. It is centred on the principles of sustainable development, an ecosystems approach, integrated management and a precautionary approach in keeping with the spirit of the *Oceans Act* and *Species at Risk Act*.

This plan is designed to be implemented in conjunction with an annual update that adjusts specific fishery management measures relating to fishing areas, seasons and catch limits to reflect conservation imperatives. This update will be issued as a notice to fishers before the start of the fishing season.

BACKGROUND

There are few fisheries where catches have shifted so dramatically from one part of the country to another as that of American or rainbow smelt.

In 1906, smelt stocking was begun in streams and lakes feeding Lake Michigan in order to provide forage for salmonids. Eventually large smelt populations were found in all the Great Lakes, especially Lake Erie.

Before 1948, about 99 per cent of Canadian commercial landings came from the Atlantic coast; the remainder came from British Columbia. Total east coast landings numbered about 3,700 tonnes (t) per year, with New Brunswick accounting for about 70 per cent of the total. About half of New Brunswick landings came from the Miramichi River system. In 1948, an experimental gill net fishery for smelts was undertaken in the Great Lakes and, following the conversion to trap nets, landings increased rapidly to 2,086 t by 1958. The conversion to mobile gear in the following year led to new increases, and Great Lake landings reached 8,662 t in 1962. A record of 12,399 t was attained in 1978. In 1979, Great Lakes landings totalling 10,979 t, were valued at $2,035,000. Atlantic coast (reported) landings were 2,542 t and valued at $1,065,767. It is highly likely, however, that total landings were much higher. Landings in both major fisheries seem to be determined more by market demand than by the availability of the smelt resource.

During the 1950s, the abundant new supply of smelt from the Great Lakes caused a general decline in prices paid to fishers. Prices again fell drastically in the early 1960s, with the introduction of trawls, which permitted larger catches per vessel per day. On the Miramichi River, for example, prices often exceeded 90¢/kg in the late 1940s and early 1950s; by the early 1960s, they were below

45¢/kg. Not surprisingly, the number of Miramichi smelt fishers decreased steadily throughout the 1950s and dropped drastically in 1960. Atlantic coast landings reached a low of 1,169 t in 1962. Landings remained stable between 1993 and 1998 but dropped in the 2003–2004 season due to lack of markets.

Anadromous smelt attained a much higher price than the variety in the inland lakes, which seems to confirm its higher quality. In 1979, while fishers on the Atlantic coast were getting an average of 85.5¢/kg, those on the Great Lakes were only getting 37.8¢/kg.

1. OVERVIEW OF THE FISHERY

Rainbow smelt is a pelagic schooling species, inhabiting inshore coastal regions and midwaters of lakes. On the Atlantic coast, anadromous smelt stocks are harvested commercially in fall and winter, before the start of the spawning run. Landings in the recreational and tourism fishery account for a very low percentage of the total landings.

In the fall, commercial fishers use gill nets as well as box nets in open water. In winter, when most of the catches are made, the fishing is done through holes cut in the ice. The commercial fishing gear used comprises box nets, bag nets and gill nets. As for the recreational fishery, it is carried out using dip nets in April and May and the daily limit is 60 smelt. Smelt fishing using spears, drop lines or set lines is allowed in certain rivers and is traditionally carried out from wharves in the summer or ice shacks in the winter.

For many East Coast fishers, the smelt fishery is an off-season activity and year-to-year variation in participation will therefore be influenced by their economic success in other commercial fisheries and the prices offered. For others, the smelt fishery, combined with other coastal fisheries such as those for gaspereau, eels, oysters and clams, is the principal means of livelihood.

Although the smelt fishery had a significant economic impact until the mid-1900s, it is no longer a major fishery. The fact that landings have always been under-reported has not helped. Many commercial and recreational fishers used this fishery to provide an undeclared supplementary income. Such practice does not justify a research priority by the Science Branch, falsifies landing statistics and the landed value and does not reflect the magnitude of this fishery. As a result, less and less effort is made to manage the smelt fishery in a scientific manner.

The authorized tomcod bycatch in the smelt fishery is a source of supplementary income for smelt fishers, especially in the Miramichi River ecosystem. However, tomcod is caught primarily in the fall and approximately one week in winter when it returns upriver.

1.1 Participants

Based on 2004 data, the commercial smelt fishery in Eastern New Brunswick involved 599 licence holders (down 38 licences from 2000), with a total of 45,180 fathoms of gill net and 620 box nets and bag nets. The 599 licences were divided among the following users: core fishers, coastal fishers and Aboriginal fishers. The following tables give a detailed overview of participants in the fishery.

Table 1. Number of fishers, type of licence and amount of gear by statistical district in Eastern New Brunswick, 2000

	LICENCE			GEAR				
STATISTICAL DISTRICT (1)	COASTAL (2)	CORE	TOTAL LICENCES	GILL NETS in fathoms (3)	TRAP NETS	BOX NETS	SQUARE NETS	BAG NETS
63	5	11	16	105	5	55		5
64	3	7	10	600	19	15		
65	27	26	53	3,015	185	19		2
66	18	51	69	13,740	38	152		
67	20	21	41	5,315	21	105		2
68	13	28	41	4,785	174	18		1
70	32	51	83	825	113	606		2
71	26	4	30	15	17	283	1	
73	15	52	67	450	407	215		
75	4	37	41	2,220	135	5		1
76	15	50	65	3,660	301	1		2
77	21	44	65	8,787	347	3		8
78	5	10	15	865	85	4		
80	8	33	41	150	34	113		48
TOTAL	212	425	637	44,532	1,881	1,594	1	71

(1) Appendix 2 contains a map and descriptions of the statistical districts.

(2) The profile of the coastal licence holders and their participation in this fishery is set out in Tables 3 and 5.

(3) 1 gill net equals 15 fathoms.

Table 2. Number of fishers, type of licence and amount of gear by watershed in Eastern New Brunswick, 2004

	LICENCE			GEAR				
WATERSHED (4)	COASTAL (5)	CORE	TOTAL LICENCES	GILL NETS in fathoms	TRAP NETS	BOX NETS	SQUARE NETS	BAG NETS
1	7	22	29	1,350	27	92	0	13
2	21	21	42	2,985	180	19	0	0
3	26	55	81	16,570	19	222	0	2
4	7	6	13	655	6	31	0	0
5	9	27	36	5,400	199	21	0	1
6	9	23	32	585	60	160	0	2
7	15	15	30	600	35	256	0	0
8	44	73	117	930	474	702	0	0
9	7	31	38	1,890	140	5	0	1
10	7	49	56	4,650	314	1	0	2
11	6	32	38	2,280	200	0	0	5
12	10	12	22	3,792	72	0	0	1
13	7	12	19	2,665	114	7	0	2
14	0	6	6	680	41	0	0	0
15	5	20	25	0	18	76	0	41
16	2	13	15	150	23	31	0	5
TOTAL	182	417	599	45,182	1,922	1,623	0	75

(4) Appendix 1 contains a map and descriptions of the watersheds.

(5) The profile of the coastal licence holders and their participation in this fishery is set out in Tables 4 and 6.

Table 3. Amount of gear (except for gill nets) by coastal fisher, by statistical district, 2000

Stat. Dist.	Amount of Gear																	
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**13**	**14**	**15**	**17**	**19**	**20**	**23**
63	4		1															
64		2					1											
65	6	3	4	5	2	3	3											
66				2						3	1			1				
67	1	3	4	2	2							1			1			
68	3	2	1	1	1		1		1	1								
70	2	4	4	2	4	4	1		3		1	1	1	5		1	1	
71	2	4			5	3	1	3		1	2	1		4			1	1
73	1	3	4		2	2				1		2		1				
75	1	1		1		1												
76	2	6			1	1	2			1		1						
77	6	4	2	1	1		1						1	1				
78	1	2	1	1														
80	2	2	3	1	2				1									
Total	**31**	**36**	**24**	**16**	**20**	**14**	**10**	**3**	**5**	**7**	**4**	**6**	**2**	**12**	**1**	**1**	**2**	**1**

Table 4. Amount of gear (except for gill nets) by coastal fisher, by watershed, 2004

Water-shed	Amount of Gear																					
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**17**	**19**	**20**	**23**	**25**	**29**	**30**
1	3	2	3	1	1	2	3	2	1	2	0	0	1	0	1	0	0	0	0	0	0	0
2	4	6	4	6	2	4	4	2	0	3	1	0	0	2	0	0	0	0	0	0	0	0
3	2	2	6	2	5	0	2	3	1	1	0	1	1	3	3	0	0	0	0	0	0	0
4	1	1	3	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	5	2	0	1	2	1	2	2	2	1	1	1	0	6	0	0	0	0	0	0	0
6	2	3	2	1	5	4	2	1	3	2	0	1	0	0	3	0	0	0	0	0	1	0
7	1	2	0	0	5	1	2	2	3	3	2	1	1	1	4	0	1	1	0	0	0	0
8	2	7	3	8	12	7	1	9	3	10	5	8	2	6	26	1	0	2	1	2	0	1
9	6	6	3	2	3	4	1	2	0	1	1	0	1	0	1	0	0	0	0	0	0	0
10	6	5	6	2	1	5	6	3	1	1	1	1	2	1	5	1	0	0	0	0	0	0
11	6	6	4	2	6	1	2	3	0	1	1	1	0	0	4	0	0	0	0	0	0	0
12	5	6	2	2	0	0	1	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13	3	3	1	1	0	0	1	0	0	3	0	1	0	2	2	0	0	0	0	0	0	0
14	1	1	0	0	0	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
15	1	5	0	7	3	0	2	3	1	1	0	2	0	0	0	0	0	0	0	0	0	0
16	0	1	3	0	3	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**44**	**61**	**42**	**35**	**50**	**35**	**30**	**35**	**16**	**30**	**14**	**17**	**10**	**15**	**55**	**2**	**1**	**3**	**1**	**2**	**1**	**1**

Table 5. Profile of coastal licence holders by statistical district, 2000

Statistical District	Licences		Gear		
	Smelt only	Smelt and other licences	<8 units of gear	8 units of gear and more	Gill nets only
63	5	0	5	0	0
64	3	0	3	0	0
65	7	20	25	1	1
66	7	11	4	5	3
67	7	13	7	7	2
68	5	8	5	6	1
70	10	22	18	14	0
71	7	19	10	16	0
73	1	14	10	5	0
75	2	2	4	0	0
76	7	8	9	4	0
77	3	18	13	4	1
78	2	3	5	0	0
80	1	7	7	1	0
Total	**67**	**145**	**125**	**63**	**8**

Table 6. Profile of coastal licence holders by watershed, 2004

Watershed	Licence		Gear		
	Smelt only	Smelt and other licences	<8 units of gear	8 units of gear and more	Gill nets only
1	2	5	5	1	1
2	5	16	12	7	2
3	8	18	6	9	11
4	0	7	7	0	0
5	4	5	3	3	3
6	3	6	7	2	0
7	2	13	6	9	0
8	11	33	18	26	0
9	3	4	6	1	0
10	3	4	6	0	1
11	3	3	5	1	0
12	0	10	9	0	1
13	0	7	4	1	2
14	0	0	0	0	0
15	0	5	3	2	0
16	1	1	2	0	0
Total	**45**	**137**	**99**	**62**	**21**

Table 7. Number of commercial smelt licences, 1991–2004

Year	Number of Licences	Year	Number of Licences
1991	808	1999	687
1992	793	2000	637
1993	778	2004	599
1994	755		
1995	744		
1996	727		
1997	702		
1998	695		

Aboriginal fishery

Aboriginal groups (Elsipogtog First Nation, Bouctouche First Nation, Eel River Bar First Nation, Esgenoopetitj First Nation and New Brunswick Aboriginal Peoples Council) hold communal commercial smelt licences.

The Marshall decision confirmed a treaty right of Mi'kmaq and Maliseet First Nations to fish for limited commercial purposes. Commercial fishing licences reallocated to Aboriginal organizations affected by the Marshall decision are the result of the voluntary buy-back of traditional communal fishing licences. These licences are subject to the management measures in place in the commercial fishery.

The Aboriginal Fisheries Strategy provides a regulatory framework for the management of fisheries for food, social and ceremonial purposes. Licences issued for these purposes include conditions relating to catch limits, fishing areas, gear and fishing seasons.

In total, 56 licences were issued to Aboriginal groups for the communal commercial fishery and for food, social and ceremonial purposes.

1.2 Location of the fishery

Table 8. Potential commercial fishing effort by ecosystem, 2000

ECOSYSTEM	# Fishers	# Box nets	# Bag nets	# Fathoms of gill nets
Restigouche River above the Van Horne Bridge at Campbellton	18	69	5	0
Chaleur Bay	17	49	0	750
Chaleur Bay, east of the ferry wharf at Dalhousie	1	0	0	75
Bathurst Harbour	7	41	0	225
Caraquet Bay	47	198	0	405
Saint-Simon Bay	65	265	0	555
Pokesudie Island	47	198	0	405
Pokemouche River between the Inkerman Bridge and the Route 113 bridge	3	14	0	300
Pokemouche River above the Landry Office bridge	12	34	0	150
Shippagan Bay	18	120	0	300
Petite Lamèque Bay	17	118	0	300
Lamèque Bay	17	118	0	300
Miscou Bay	5	26	0	0
Miscou Harbour	12	85	0	0
Gloucester County	112	3	0	25,955
Tracadie Bay	12	123	1	0
Big Tracadie River	24	163	0	150
Little Tracadie River	21	19	1	150
Tabusintac Bay, Tabusintac River	33	125	4	420
Neguac Bay	38	317	2	375
Miramichi Bay	130	1,321	0	315
Miramichi River	25	164	0	150
Napan River	1	31	0	0
Bay du Vin River	2	17	0	0

ECOSYSTEM	# Fishers	# Box nets	# Bag nets	# Fathoms of gill nets
Black River	5	25	0	0
Kouchibouguacis River, in Kouchibouguac National Park	12	47	0	1,095
Kouchibouguac Bay, in Kouchibouguac National Park	5	32	0	0
Kouchibouguac River, in Kouchibouguac National Park	11	53	1	0
Kouchibouguac River, outside of Kouchibouguac National Park	8	20	2	15
St. Louis Bay	2	15	0	0
Richibouctou River	44	227	2	3,415
Richibouctou Harbour	2	12	0	330
Baie du Village, Richibouctou	4	6	0	500
Bouctouche River	5	10	2	0
Bouctouche Bay	19	130	0	675
Cocagne River	13	26	1	1,747
Cocagne Bay	11	47	0	2,060
St. Charles River (Aldouane)	4	12	0	450
Shediac Bay	14	73	0	1,575
Shediac River	3	19	0	675
Aboujagane River	4	27	0	680
Shemogue	24	76	34	0
Northumberland Strait, adjacent to Kent County	51	170	0	2,515
Northumberland Strait, adjacent to Westmorland County	29	93	9	1,125
Murray Corner Wharf	1	1	0	0
Cape Spear	1	2	0	0
Gaspareau River	3	2	5	0
Baie Verte	1	2	0	0
No fishing area indicated	2	7	0	0

Table 9. Potential commercial fishing effort by ecosystem, 2004

ECOSYSTEM	# Fishers	# Box Nets	# Trap Nets	# Bag Nets	# Fathoms of gill nets
Restigouche River	13	45	5	8	0
Chaleur Bay	30	93	27	13	825
Bathurst Harbour	5	22	19	0	0
Caraquet Bay	40	22	180	0	765
Saint-Simon Bay	51	69	191	2	765
Pokesudie Island	40	19	180	0	765
Pokemouche River	12	43	0	2	150
Shippagan Bay	17	96	11	2	150
Petite Lamèque Bay	15	91	11	2	150
Lamèque Bay	15	91	11	2	150
Miscou Bay	4	27	0	0	0
Miscou Harbour	12	86	0	0	1050
Gloucester County	106	18	9	0	24 995
Tracadie Bay	13	2	122	1	375
Big Tracadie River	21	18	141	0	375
Little Tracadie River	17	5	146	1	375
Tabusintac Bay	21	89	11	0	405
Tabusintac River	25	136	45	2	330
Neguac River	42	334	47	2	540
Miramichi Bay	119	693	500	0	345
Miramichi River	20	179	10	0	150
Bay du Vin River	3	0	17	0	0
Black River	5	0	25	0	0
Kouchibouguacis River, in Kouchibouguac National Park	8	0	25	0	525
Kouchibouguacis River, outside Kouchibouguac National Park	4	0	7	0	0

ECOSYSTEM	# Fishers	# Box Nets	# Trap Nets	# Bag Nets	# Fathoms of gill nets
Kouchibouguac Bay, in Kouchibouguac National Park	6	0	39	0	0
Kouchibouguac River, in Kouchibouguac National Park	12	0	77	1	600
Kouchibouguac River, outside of Kouchibouguac National Park	6	0	22	0	15
St. Louis Bay	2	0	10	0	0
Richibouctou River	44	1	241	2	3565
Richibouctou Harbour	3	0	25	0	330
Baie du Village, Richibouctou	4	0	6	0	500
Bouctouche River	3	0	8	4	0
Bouctouche Bay	19	0	133	0	405
Cocagne River	13	0	22	1	1597
Cocagne	1	0	8	0	150
Cocagne Bay	8	0	32	0	2345
St. Charles River (Aldouane)	6	0	25	0	465
Shediac Bay	14	0	91	0	1575
Shediac River	2	0	17	0	675
Grand Digue	1	0	0	0	325
Aboujagane River	3	0	23	0	80
Kouchibouguac River, Westmorland County	1	3	0	0	0
Cape Spear	1	2	0	0	0
Shemogue	21	59	12	33	0
Northumberland Strait, adjacent to Kent County	53	5	194	0	3190
Northumberland Strait, adjacent to Westmorland County	42	102	59	27	750
Gaspareau River	3	2	0	5	0
Murray Corner Whar	1	1	0	0	0
Baie Verte	1	2	0	0	0

ECOSYSTEM	# Fishers	# Box Nets	# Trap Nets	# Bag Nets	# Fathoms of gill nets
No fishing area indicated	8	12	30	1	1350
New Brunswick	1	0	15	0	100

This data was taken from the conditions of the licences. The total number of fishers and gear in the table is higher than the actual total number of licence holders and amount of gear, as the licence conditions of some fishers are valid for more than one ecosystem.

Table 10. Recreational and tourism fishing effort by ecosystem, from ice shacks, 2000

ECOSYSTEM	# Ice Shacks
Chaleur Bay west of Dalhousie	75
Dalhousie Harbour	53
Jacket River Harbour	7
Beresford	4
Bathurst Harbour	67
Caraquet Bay, Saint-Simon Bay, Pokesudie Island	211
Shippagan Bay, Lamèque Bay, Petite Lamèque Bay	176
Petit-Shippagan, Miscou	44
Tracadie Bay, Big Tracadie River, Little Tracadie River	11
Tabusintac Bay, Tabusintac River	64
Neguac Bay	2
Miramichi Bay, Napan River, Bay du Vin River, Black River	4
Kouchibouguacis River	6
Richibouctou Harbour, Richibouctou River, Baie du Village, St-Charles River	37
Bouctouche Bay, Bouctouche River	30
Cocagne Island	3
Shediac Bridge	6
Shediac Bay, Shediac River	20
Little Shemogue Harbour, Shemogue	25
Murray Corner to Cape Tormentine	6
Total	851

Table 11. Recreational and tourism fishing effort by ecosystem, from ice shacks, 2004

ECOSYSTEM	# Ice Shacks
Chaleur Bay west of Dalhousie	45
Dalhousie Harbour	28
Jacket River Harbour	10
Beresford	5
Bathurst Harbour	52
Caraquet Bay, Saint-Simon Bay, Pokesudie Island	190
Inkerman, Pokemouche River	5
Shippagan Bay, Lamèque Bay, Petite Lamèque Bay	142
Petit-Shippagan, Miscou	26
Tracadie Bay, Big Tracadie River, Little Tracadie River	15
Brantville Bay	9
Tabusintac Bay, Tabusintac River	3
Neguac Bay	5
Miramichi Bay, Napan River, Bay du Vin River, Black River	0
Kouchibouguacis River	10
Richibouctou Harbour, Richibouctou River, Baie du Village, St-Charles River	35
Bouctouche Bay, Bouctouche River	50
Cocagne Island	5
Shediac Bridge	20
Shediac Bay, Shediac River	20
Little Shemogue Harbour, Shemogue	70
Murray Corner to Cape Tormentine	6
Total	751

These tables provide an estimate of the number of shacks on the ice each year, based on optimal ice conditions.

1.3 Fishing Seasons

Smelt fishing seasons are established by the *Maritime Provinces Fishery Regulations* and are modified by order, as required, in consultation with the Advisory Committee members. The incidence of bycatch of non-target species or species identified as being at risk may affect the fishing seasons or lead to a fishery closure. Under the Regulations, the open time is different for bag nets and box nets and varies on a season-by-season basis.

1.4 Fishing methods

The Regulations allow fishing for smelt with different types of gear, as described below. The trap net is constantly being modified to improve catch performance and reduce handling effort. See Appendix 3 for illustrations giving a general idea of the type of gear being used (but not a drawing of the exact gear).

- Gill net: net used to catch fish by enmeshing them but which does not form an enclosure in the water.

- Bag net: is affixed to stakes or to buoys and consists of a bag that floats with the tide or currents. It allows the catching of fish without enmeshing them.

- Trap net: net that is set to enclose a stretch of water into which the fish is guided by means of one or several leaders with one or several openings. Trap nets includes box nets.

- Dip net: is mounted on fixed armature at the end of a sleeve and which is used by hand to catch fish without enmeshing it.

- Spear: a point at the end of a shaft that is used by hand to spear a fish in passing.

- Line: fishing line mounted on a rod held in the hand and fitted with fish hooks.

Under the Regulations, gill nets, bag nets and box (trap) nets can be used in the commercial fishery, whereas dip nets, lines and spears can be used in the recreational fishery.

Ice fishing for smelt using spears or lines is very important for the tourism and recreational sectors. The white man adopted this fishery from the Mi'kmaq people. Ever since, there have been smelt shacks the length of New Brunswick's east coast.

Although fishers use different names for trap nets, the latter commonly includes such gear as box nets or trap nets; double box nets; and square nets. Box or trap nets with one leader are used to fish a single tide. Fewer and fewer fishers are using this type of gear. Double box nets consist of two adjacent box nets fitted either with two leaders or a leader that separates into two leaders. Even though the trap is doubled, it does not necessarily double the daily catch but it does allow two tides to be fished. The square net is set directly in the channel. Its two leaders allow for a large opening and the gear performs very well as very few smelt can escape it. The square and bag nets with two leaders and one opening are used less and less in the fishery.

Since the 2001–2002 season, tags have been issued for gill nets. Different colour tags are used for trap nets, bag nets and gill nets. Tags shall be affixed to the upper cable (cork line) at one end of the gill net or group of nets joined together. One tag is required for every 15 fathoms of gill net.

1.5 Landings, value and market

Although the statistics do not accurately reflect actual landings, the trend seems to indicate an annual decrease in smelt catches. Many fishers do not report or under-report landings. In 1999, a mandatory logbook was introduced to obtain more accurate data on the fishery. Since the logbook program required the ongoing co-operation of the fishers, the program was discontinued in fall 2006 and alternative methods will have to be implemented to determine the actual landings in the fishery.

Historically, the fishers have reported that the fishing effort depends on the price paid at the start of the season, since prices tend to fall later in the season, once all the gear is in the water.

It is important to note that annual catches are also dependent on market conditions. The fishers report that the introduction of the Chilean capelin to the market at a lower price and bearing the name “smelt” created competition with their local product. In the end, a higher-quality local product will find its place in the market.

The Advisory Committee members often mentioned a practice whereby buyers buy smelt caught at the end of the season by Quebec fishers at a low price to be sold at the start of the following season at a higher price. This smelt is reported to be of lesser quality. Efforts have been made to co-ordinate the seasons between provinces, but have been unsuccessful.

The following table shows total landings by type of fishery, in open water in fall and under the ice in winter. The landings in the ice fishery are greater than those in open water.

Table 12. Total landings by type of fishery (open water in fall and ice fishing in winter) in Eastern New Brunswick, 1988–1998

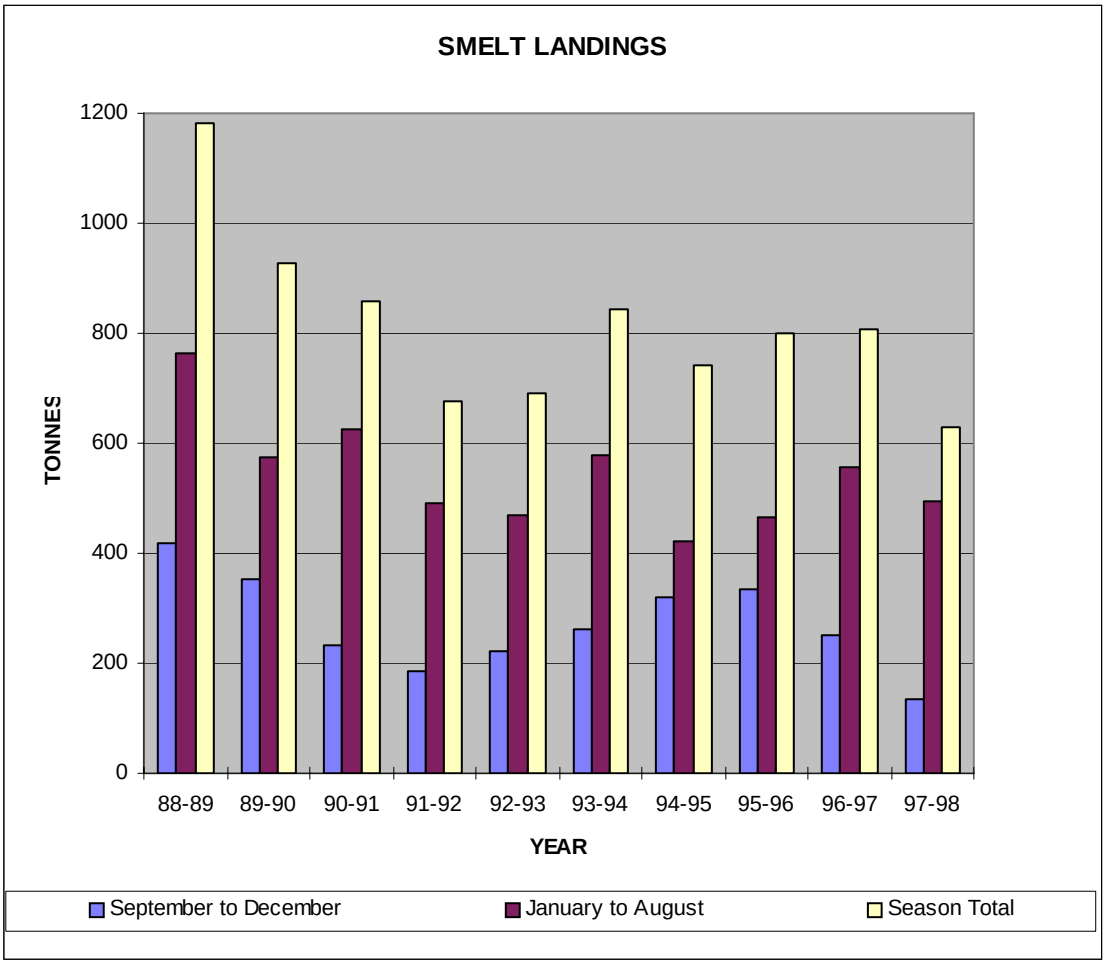


Table 13. Landings and landed value by statistical district in Eastern New Brunswick, 1992–1998

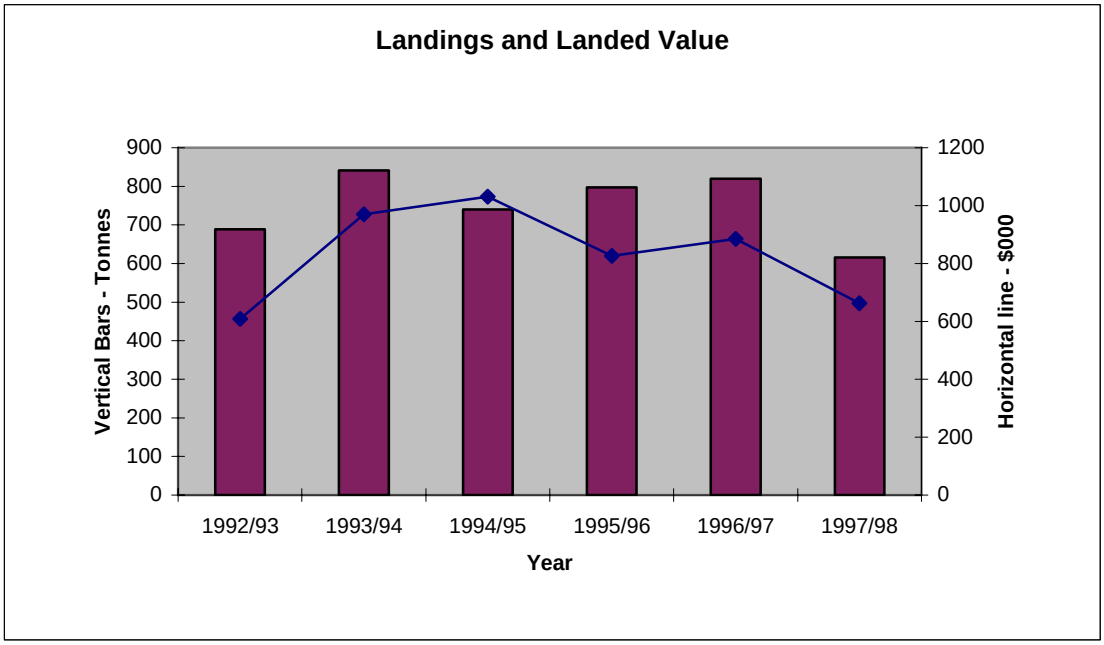
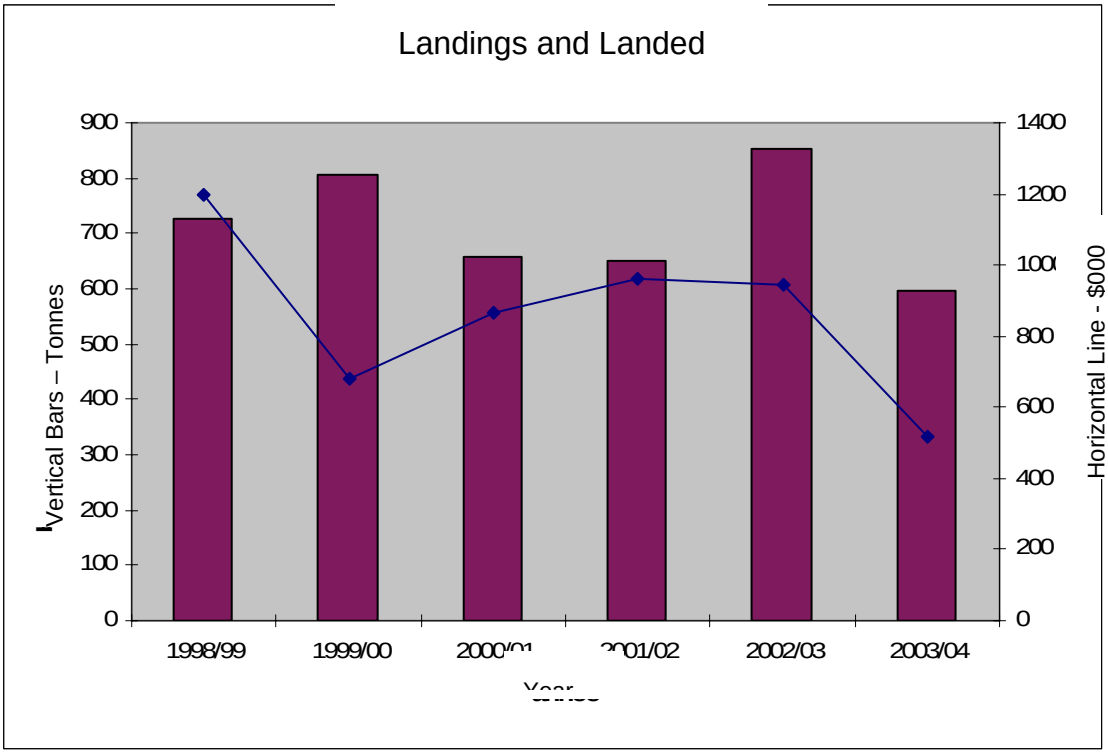


Table 14. Landings and landed value by statistical district in Eastern New Brunswick, 1998–2004



Prior to 1948 the commercial smelt fishery was carried out primarily on the Atlantic coast. However, in that year an experimental gill net fishery was established in the Great Lakes, and became increasingly successful. The Great Lakes fishery gradually overtook the Atlantic coast fishery, in terms of both the weight and market value of total landings. Most of the smelt catch is sold either frozen or fresh.

Table 15. Landings and landed value by statistical district, 1993–1998

STAT. DIST.	t	$ (000)	t	$ (000)	t	$ (000)	t	$ (000)	t	$ (000)
	93/94	93/94	94/95	94/95	95/96	95/96	96/97	96/97	97/98	97/98
63	50	52	42	46	61	43	71	66	22	23
64	11	13	23	37	18	21	32	35	18	19
65	18	33	45	64	46	70	82	91	83	93
66	79	113	58	81	49	55	48	52	86	95
67	48	48	32	44	21	30	27	29	15	16
68	14	22	24	32	18	21	5	5	11	12
70	129	147	104	148	88	84	134	125	174	196
71	20	25	20	27	30	25	28	32	33	34
73	98	93	29	35	27	18	123	110	150	158
75	8	10	32	46	75	68	48	58	37	39
76	254	261	191	256	213	190	103	126	149	151
77	100	138	105	162	127	174	95	137	30	40
78	4	5	25	37	13	15	15	12	25	24
80	8	10	10	16	11	13	9	7	4	5
Estimate of the recreational fishery									100	0
TOTAL	841	970	740	1031	797	827	820	885	937	905

Table 16. Landings and landed value by statistical district, 1998–2004

STAT. DIST.	t	$ (000)	t	$ (000)	t	$ (000)	t	$ (000)	t	$ (000)	t	$ (000)
	98/99	98/99	99/00	99/00	00/01	00/01	01/02	01/02	02/03	02/03	03/04	03/04
63	9	14	10	14	11	15	3	3	5	6	5	6
64	19	29	16	12	12	17	22	32	20	21	11	9
65	109	183	68	59	44	59	24	35	20	25	10	11
66	36	59	31	32	28	37	19	28	16	22	23	25
67	10	16	13	12	7	8	10	14	11	14	11	11
68	11	19	10	8	7	9	11	15	12	15	30	23
70	149	248	138	108	132	176	129	204	196	208	6	57
71	60	99	84	79	92	118	138	210	51	46	68	47
73	165	268	119	105	118	139	68	86	115	1	67	49
75	25	41	21	14	17	22	24	35	26	32	28	29
76	77	127	221	188	112	158	139	206	307	334	208	195
77	31	53	45	26	33	47	8	59	46	60	29	31
78	11	18	15	11	21	25	6	7	15	17	18	16
80	13	21	16	12	23	36	21	28	13	20	11	11
TOTAL	725	1,195	807	680	657	866	652	962	853	945	595	520
Number of active fishers							191		182		129	

1.6 Advisory Process

The Smelt Fishery Advisory Committee consists of representatives of the commercial fishery (Maritime Fishermen's Union and other organizations), one representative of the recreational fishery, representatives of the Aboriginal groups, representatives of the provincial and federal departments, and representatives of the local processing plants. It generally meets every two years or as required, and may hold meetings on a watershed basis on request, to discuss specific issues.

The representatives, appointed by their peers or by fishers' organizations such as the Maritime Fishermen's Union to sit on the Smelt Fishery Advisory Committee, inform the committee of the

status of the fishery in their area, provide recommendations for the management of the fishery and propose changes to the regulations and policy. They tell DFO of any existing problems and conflicts requiring action by the DFO. They provide a link between all the fishers and users of the resource, the various watershed management committees and the federal and provincial governments. To reflect this broad base, the recommendations made to DFO are reached through consensus, rather than by vote. DFO requires that appointed representatives consult with users of their respective areas beforehand and inform them of the results of Committee discussions. Fishers who are not satisfied with their representative or with the Committee should inform DFO in writing as soon as possible.

In addition, the fishers and representatives on the Advisory Committee attend a science workshop on the smelt fishery, which is held periodically by the Science Branch.

The most recent list of Advisory Committee members can be found in Appendix 4.

1.7 Type of management

The fishery is managed by means of a limited number of fishing licences, seasons, mesh size, the amount and location of fishing gear as well as the Commercial Fisheries Licensing Policy for the Gulf Region (Appendix 5).

2. INTEGRATED ECOSYSTEM-BASED MANAGEMENT

With the objective of supporting sustainable coastal fisheries, the ecosystem-based management approach seeks to achieve the active participation of licence holders in respect of all harvested species in a given marine environment (watershed). This approach differs from the traditional integrated species-based management approach in that it is focused on ensuring biological diversity and ecosystem productivity.

In the future, it is desirable that consultations be organized on a watershed basis rather than on a species basis. This approach will encourage the establishment of measures for a sustainable fishery within a watershed, rationalizing the number of licences and amount of gear for each coastal species and minimizing the impact of harvesting one species on another. Specific, well-founded management measures will be able to be applied depending on the particular characteristics of the marine environment. Consultations with users will enhance their sense of belonging to their respective ecosystems.

The integrated management plans for various watersheds already contain a number of specific management measures. They include gear limits for gaspereau fishers in the Miramichi watershed, leader length, the various fishing seasons, prohibitions against reallocating licences inside Kouchibouguac National Park, the closure of certain smelt fisheries, etc. The Advisory Committee members often take into account particular factors in their respective regions and propose, in consultation with local users, management measures regarding seasons, prohibitions, and distance between fishing gear.

The ecosystem-based approach will ensure effective management and sustainable development of coastal fisheries, while also taking into account the specific needs of watersheds and their users. Furthermore, an ecosystem-based approach to the management of coastal species means that other stakeholders with a potential impact on these species can be included in the future.

3. SPECIES AT RISK ACT

The *Species at Risk Act* (SARA) is a federal act, the result of several years' work to reach an agreement with the provinces and territories. It came into effect in June 2003 and its prohibition provisions in June 2004. SARA contains the official list of species at risk and the designation assigned to each species.

The Act is co-ordinated by three major federal bodies. Environment Canada has general responsibility for wildlife species and migratory birds, while Fisheries and Oceans Canada is responsible for aquatic species and Parks Canada Agency is responsible for species found in national parks and national historic sites.

The objectives of SARA are to prevent wildlife species from becoming extirpated in Canada, to enable the protection and recovery of extinct, endangered or threatened species, and to manage species of special concern in order to prevent them from becoming endangered or threatened.

A species is designated extinct when it no longer exists anywhere, and extirpated when it no longer exists in the wild in Canada. An endangered species is a species that is facing imminent extinction or extirpation. A threatened species is a species that is likely to become endangered if limiting factors are not reversed, and a species of special concern is a species that is sensitive to human activity or natural phenomena.

SARA confers certain powers on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC – www.cosewic.gc.ca). COSEWIC is responsible for assessing the status of species, identifying the threats posed to the species by human activity, and producing status reports on species thought to be at risk.

The list currently includes several aquatic species: Atlantic salmon (Inner Bay of Fundy population), leatherback seaturtle, Atlantic whitefish, Lake Utopia dwarf smelt, northern wolffish, spotted wolffish and Atlantic wolffish.

The process of adding a species to the official list involves the following steps:

- COSEWIC species assessment

  -sent to the Minister of Environment

- Government response

  -explains in detail how the government will respond to the assessment

- Consultation phase

  -gathers information on the potential costs and benefits of adding the species to the list

- Analysis phase

  -examines and assembles the information obtained in the consultations

- Recommendation to the Minister

  -recommendation to the Minister of Environment

- Government of Canada decision regarding addition to the list

  -accepts the assessment and adds the species to the list

  -decides not to add the species to the list

  -refers the matter back to COSEWIC for further information or review

In order to protect species that are designated extinct, endangered or threatened, the Act makes it an offence to:

-kill, harm, harass, capture or take an individual of such a species;

-possess, collect, buy, sell or trade an individual or any part of an individual of such a species;

-damage or destroy the residence of one or more individuals of such a species;

-destroy the critical habitat defined in the recovery strategy of such species.

The Act also allows the Minister to issue a permit to allow for incidental harm to a listed species if it is determined that:

-all reasonable alternatives have been considered and the best solution has been adopted;

-all feasible measures have been taken to minimize the impact of the activity on the species;

-the activity will not jeopardize the survival or recovery of the species.

The addition of a species to the SARA list triggers the application of prohibitions and mandatory recovery measures. For extinct, endangered or threatened species, a recovery strategy and action plan must be implemented. For a species of special concern, a management plan is required.

The following species are candidates for addition to the SARA list: cusk, harbour porpoise, yellow lampmussel, Atlantic cod (Maritimes population), striped bass and eel.

4. STOCK STATUS REPORT

4.1 Biology, environment and habitat[1]

The scientific name of the rainbow or American smelt is *Osmerus mordax.* It belongs to the family *Osmeridae,* which also includes the longfin smelt and the eulachon of the west coast, the pond smelt of the western Arctic and the capelin which inhabits east coast waters. Rainbow smelt is a pelagic schooling species, inhabiting inshore coastal regions and the midwaters of lakes. Since it is sensitive to both light and warmer temperatures, schools of smelt tend to concentrate near the bottom of lakes and coastal waters during daylight hours.

The smelt somewhat resembles a miniature salmon. The coloration on its back is a transparent olive green, its sides are paler with a wide longitudinal silver band and its belly is silvered; its body and fins are sprinkled with small blackish spots. Fresh from the water, the sides of the fish are an iridescent purple, blue or pink. Most specimens are less than 20 cm long, although some measuring 35 cm have been found. Smelt inhabiting small inland lakes are smaller, no longer than 10 cm in length. The scales on the smelt are large and are easily detached, and at spawning time those on the males develop small tubercles resembling tiny buttons, which serve as a mark of their sex. The lower jaw projects beyond the upper one and the entire mouth extends beyond the middle of the eye. On the tip of the tongue are large teeth. One large dorsal fin is located about halfway along the back and, behind that, a small adipose fin.

The smelt is a coastal species whose range stretches from Labrador to New Jersey. It is primarily abundant in the southern part of the Gulf of St. Lawrence. Like the salmon, it is a migrator that returns upriver to spawn in fresh water. The adults gather in river estuaries in the fall but they only start the return to their spawning grounds in fresh water in March. During bad weather, however, or where obstructions along the migratory route inhibit movement, some spawning may occur before the sites are reached. Stormy weather may also cause spawning to take place along beaches on or gravelly-bottomed offshore banks.

Smelt in the Miramichi River system, for example, begin their upstream migration before the spring thaw has begun. When ice breakup begins, freshets can temporarily halt upstream migration, and, in some instances, force to smelt to move back downstream. If the migration is sufficiently delayed, spawning may take place below the head of the tide.

Spawners reach the tide head in the main tributaries when the water temperature is only 4ºC to 5ºC. Smaller streams are entered when the temperature is 6ºC to 7ºC.

Once the freshwater site has been reached, the smelt remain there spawning for a number of days. At any given age, the larger smelt spawn first. This applies to the entire migrating population, so that the average size of smelt on the spawning grounds decreases as the season advances. Shortly after spawning, many of the males die.

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[1] *Underwater World – The American Smelt* and *Underwater World – Atlantic Pelagic and Diadromous Fish,* published by the DFO Communications Branch

In the Miramichi system, where stocks have been more intensively studied than others, studies have shown that 66 per cent of spawners were two years old, 30 per cent were three years old and four percent were four, five or six years old. During spawning, which occurs at night, typically over a gravelly bottom, two or more males place themselves alongside a female and release their milt at the same time as the female releases a cluster of eggs. A fully grown adult female (about 21 cm long) will produce about 70,000 eggs. The surviving males and the females stay in these waters for five to ten days before returning to the sea. They spend the summer in Miramichi Bay and then, in early October, they reappear in the estuary and, in late November, when the ice forms, they move to the lower part of the estuary and the bottom of the bay to spend the winter there.

Thanks to tagging, it has been demonstrated that most of the Miramichi smelt return to spawn in the same watercourse or in one near by. Very little exchange was noted between the different tributaries or watercourses where spawning takes place at different times. It seems, therefore, that the smelt is regular in its spawning runs.

4.2 Species interactions[2]

According to studies of Miramichi River populations, smelt larvae feed on minuscule zooplankton while adults feed on larger zooplankton as well as shrimp and shrimplike organisms, aquatic worms and small fish such as juvenile herring, mummichog and silversides.

Conversely, Miramichi smelt are prey for cod, tomcod, black salmon (salmon that return to the sea in spring after hibernating in the rivers after spawning), seals, otters and mink, gulls, cormorants and mergansers.

4.3 Stock assessment

Even though research cruises for ground fish and for herring mention the presence of smelt, there has been no research exclusively focussed on smelt. On the whole, there is very little scientific information on the smelt fishery or on the dynamics of populations in the southern part of the Gulf of St. Lawrence. Except for the Northwest and Southwest Miramichi, there have been no recent estimates of population size or catch rate and it is generally agreed that actual landings are not known. Growth rates are known but the natural mortality rate of the populations has not been determined. In the absence of estimates regarding these parameters, the Science Branch cannot advise on a level of conservation, an optimum harvesting rate or a level of sustainable catches.

4.4 Research

In the last few decades, several research projects were carried out, namely a study on the bycatch of the smelt fishery in Miramichi Bay and a telephone survey on smelt landings in Chaleur Bay and surrounding areas (districts 63 to 67) for the fall 1995 and winter 1996 commercial fishery. For its part, the Government of Quebec, through its Department of the Environment and Wildlife,

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[2] *Underwater World – The American Smelt* and *Underwater World – Atlantic Pelagic and Diadromous Fish*, published by the DFO Communications Branch

conducted a study of rainbow smelt stocks and harvesting in Chaleur Bay in 1996. A non-exhaustive list of scientific and technical studies can be found in Appendix 6.

5. LONG-TERM MANAGEMENT OBJECTIVES

The long-term management objectives for the smelt fishery in the Eastern New Brunswick Area are defined as follows:

Science

- make recommendations on stock status and identification, to the extent permitted by available resources and data
- mesh size recommendations for trap nets and bag nets
- reduction of bycatch through well-chosen seasons and gear selectivity
- establishment of seasons based on resource and market availability, taking account of the specificity of each ecosystem

Statistics

- the mandatory use of logbooks would have provided better information on actual landings; because the fishers' co-operation is essential, the logbook program was discontinued in fall 2006
- information from purchase slips should clearly identify the fishing area rather than the landing site
- account for all smelt landings in commercial, recreational and Aboriginal fisheries, on the basis of fishing season (fall/winter) and watershed

Fisheries Management

- establish the carrying capacity of each watershed
- rationalize the number of licences and amount and placement of gear
- map an inventory of locations of commercial gear on the basis of watershed
- specify the type of gear authorized and gear location in the licence conditions
- maintain an inventory of smelt shacks
- document and quantify recreational and tourism fishing effort
- implement a licensing program for the recreational fishery

Conservation and Protection

- quantify the activities of fishery officers

Habitat Management

- identify instances of harmful alteration, disruption and destruction of smelt habitat on the basis of ecosystem and participate in the development of an action plan to eliminate the factors limiting smelt productivity

- document and release to watershed management committees the number of cases of damaged habitat, project referrals, permits and restored habitats

- take smelt habitats into account when evaluating project referrals

- promote environmental stewardship

Oceans

- foster the development of watershed-based integrated resource management mechanisms within an ongoing, transparent, multi-species decision-making process developed by the parties concerned

- with the assistance of concerned groups, identify major sites of interest for smelt for the establishment of Marine Protected Areas (MPA). These areas will grant certain ecosystems special protection for the reasons outlined in the *Oceans Act*

- develop and introduce, in consultation with the groups concerned, Marine Environmental Quality (MEQ) criteria for estuaries and coastal waters

Aboriginal Fisheries

- continue to provide eligible Aboriginal groups with a level of access to the smelt fishery for food, social and ceremonial purposes that meets their needs, subject to resource conservation considerations

- continue to support the participation of Aboriginal groups in the communal commercial smelt fishery and promote the establishment of the Aboriginal fishing capacity

- facilitate the integration of Aboriginal groups into the communal commercial smelt fishery and their inclusion in the fisher community

- encourage and increase the participation of Aboriginal groups in smelt fishery Advisory Committee meetings

6. CONSERVATION-BASED MANAGEMENT MEASURES AND HARVESTING PLANS

With a downward trend in smelt landings, it is once again becoming urgent to focus on this important economic activity. This would involve the following:

6.1 Conservation and sustainable fishing

- Quantify and control the fishing effort while ensuring the conservation and protection of the species and keeping track of the economic, social and environmental impact as well as the market demand.

- Collect timely and accurate data essential for stock assessment.

- Ensure optimum use of the resource among user groups—commercial, Aboriginal, recreational and tourism—by maintaining the inventory of landings, fishing gear and their locations and quantifying landings in the recreational and tourism fishery.

- Establish a selective fishery by seasons (spawning period, bycatch and market demand), mesh sizes or other means to reduce bycatch of non-targeted species.

- Promote the guiding principle of *no net loss* of habitat productive capacity.

6.2 Commercial fishery

- Minimize bycatch of striped bass, winter flounder, hake, trout and salmon by establishing appropriate seasons, requiring the immediate release of all non-targeted species, determining an appropriate mesh size and taking part in gear selectivity trials.

- Maintain the fishing effort by limiting the number of permits and the amount and placement of fishing gear.

6.3 Aboriginal fishery

- Continue to provide eligible Aboriginal groups with a level of access to the smelt fishery for food, social and ceremonial purposes that meets their needs, subject to resource conservation considerations.

- Continue the initiatives taken following the Marshall decision, i.e., supporting the participation of Aboriginal groups in the communal commercial smelt fishery by promoting a program for voluntary buy-back of traditional commercial licences and adopting the management measures in place in the commercial fishery.

6.4 Exploratory gear

- Although no request for the use of exploratory gear has been granted for several years, requests may be submitted to DFO and will evaluated on a case-by-case basis.

6.5 Recreational fishery

- No licence is required for the recreational smelt fishery. However, DFO would like a licensing program to be implemented in the recreational fishery for coastal species.
- Quantify the recreational and tourism fishery.

6.6 Aquaculture

- There is no smelt aquaculture activity in Eastern New Brunswick.

6.7 Smelt habitat

- Identify smelt habitat to minimize the negative impact on this resource.
- Promote the guiding principle of *no net loss* of habitat productive capacity.

7. CURRENT MANAGEMENT PROBLEMS

7.1 Stock status

Issue

Although research cruises for groundfish and herring mention the presence of smelt, there is no specific research focussed exclusively on smelt. On the whole, there is very little scientific information on the smelt fishery and the dynamics of populations in the southern Gulf of St. Lawrence. No recent estimates have been made of the size of the populations and of the harvesting rate, and it is generally agreed that actual landings are not known. The growth rates are known but the rate of natural mortality of the populations has not been determined. In the absence of estimates for these parameters, the Science Branch cannot advise on a level of conservation, an optimum harvesting rate or a level of sustainable catches.

Approach

The Science Branch is seeking solutions to allow it to address this situation.

7.2 Reporting of landings

Issue

At every advisory committee meeting, members indicate that the statistics on actual smelt landings in Eastern New Brunswick are totally inaccurate, saying landings are much greater than those reported. Where a licence holder fishes away from his place of residence, catches are sometime reported at the landing site and sometimes in the statistical district of the licence holder’s residence. The result is a variation in the level of landings by statistical district from one year to another.

A mandatory logbook was introduced in 1999. Since then, fisher co-operation has decreased year by year, even though the changes requested by the fishers were made. Less than half the logbooks are returned annually.

Approach

The logbook will be discontinued and other methods of determining actual landings may be implemented in order to ensure the effective management of this species.

7.3 Minimum mesh size

Issue

Fishers use a mesh size of 23.81 mm (15/16") and even of 21 mm as this mesh size catches smelt of all sizes whereas the regulation-size mesh of 31 mm results in each mesh being obstructed by an enmeshed smelt.

Approach

According to DFO biologists, a mesh size of less than 24 mm could result in significant catches of smelt less than 12 cm long, which is undesirable. Although modifying the minimum mesh size will not prevent the bycatch of non-target species, the Regulations will have to be amended to legalize the use of a mesh size of 23.81 mm, which, for fishers, represents a mesh size of 15/16".

7.4 Leaders

Issue

The leader is the part of the fishing gear that guides the fish into the gear. More and more fishers are altering their trap nets by adding an extra leader. A trap net with two leaders is just as effective as a bag net because it enables the fisher to fish two tides. Regulations do not limit the number of leaders but only their maximum length (31 m). The leader height from the sea bottom is also not covered in the regulations and leaders that touch the bottom can catch eels. Moreover, recreational fishers are asking for permission to use leaders in order to lead the smelt towards the fishing shack.

Approach

The number of leaders and the minimum length can be altered through licence conditions for conservation reasons. The *Maritime Provinces Fishery Regulations* specify in respect to smelt shacks that no person shall, without lawful excuse, possess any fishing net other than a dip net.

7.5 Gear performance

Issue

The use of multiple leaders and double trap nets constitutes an increase in the fishing effort. In fact, by using double trap nets and adding leaders and additional openings, the capacity to catch smelt is increased because the trap nets fish two tides. The fishers can thus fish twice a day.

Approach

DFO could limit the number of leaders and the number of openings by means of licence conditions.

7.6 Distance between fishing gear

Issue

Some fishers do not comply with the regulations regarding the distances between fishing gear. See Appendix 7 for the details of the regulations applying to the smelt fishery. Since 1998–99, some fishers fishing in the Miramichi Bay watershed have been able to set a maximum of two trap nets end to end (trap/leader/leader/trap or box/leader/box/leader). Two tags are necessary and the practice must be a condition of licence.

Approach

DFO will enforce the regulations regarding the specified distance to be maintained between gear, except for licences that have a condition authorizing the doubling of traps. Fishers covered by this condition must submit an annual request for a modification of licence conditions to reflect this privilege. This practice grandfathered and will be stopped when these licences are re-allocated.

7.7 Gear placement at the start of the season

Issue

In order to ensure themselves prime fishing spots, fishers begin to deploy part of the gear structures before the start of the season.

Approach

This practice is contrary to the Regulations. Fishers must wait for the official start of the season to deploy their fishing gear.

7.8 Removal of gear from the water at the end of the season

Issue

Decisions respecting the date of closure of the fishery affect gear removal. Fishers wait until the last minute to remove their gear from the water, in case the season is extended. As a result, they often do not have time to remove all gear from the water before the date of closure. DFO then has to allow them to remove their gear after the closure date, but does not authorize any landings of smelt.

Approach

The DFO order sets the date of closure to which the fishers must adhere. All gear will have to be removed from the water by the closure date. In very exceptional circumstances where the gear cannot be removed from the water, a special authorization from fishery officials indicating a removal date will have to be obtained.

7.9 Names for gear

Issue

Many fishers, fishery officers and managers use different terms to designate a single type of fishing gear. This results in many names being used to identify the same type of fishing gear. For instance, a box net and a trap net are the same. In fact, trap nets are also called square nets or box nets. No distinction is made between single traps and double traps and all kinds of names are found in the licence conditions. Despite the fact that gear differs in terms of fishing efficiency, fishers may use a different type of gear from the one indicated in the licence conditions. The performance of each type of gear has not really been established but should be in order to calculate potential fishing effort.

Approach

An inventory of gear used will have to be carried out and the licence conditions will refer to the type of gear used in the fishery. An amendment to the Regulations dealing with more precise descriptions of gear will have to be made if required.

7.10 Open and close times of fishing seasons

Issue

The opening of the open-water trap net fishery in mid-October results in an unacceptable level of juvenile bycatch in some ecosystems.

Approach

Further to a workshop on bycatch of striped bass, white hake, winter flounder and Atlantic tomcod in the autumn open-water smelt fishery in the Miramichi estuary, which was presented by Rod G. Bradford, and several other meetings held since September 1999, DFO decided to delay the opening of the commercial smelt fishery in certain tidal waters.

Because of the high bycatch rate, the bag-net and box-net fishing season in the Miramichi estuary, west of a straight line between Pointe Escuminac and Swinging Point, and the waters of Richibouctou Harbour, Richibouctou River and its tributaries is open from early November to the second week of March.

In the other areas, the fishing season will run from mid-October to the end of February. The fishing seasons in other watersheds will be delayed if bycatch remains high.

If the fishing gear continues to catch striped bass due to their location or to the season, it may be necessary to relocate this gear or to modify the season in order to reduce bycatch of striped bass to a minimum. Since striped bass is being assessed by the Committee on the Status of Endangered Species in Canada for addition to the Species at Risk Act, the management of this species must be more stringent.

7.11 Bycatch of striped bass, winter flounder and white hake

Issue

Bycatch of striped bass, winter founder and white hake in the commercial open-water fishery using trap nets and gill nets, particularly, in Miramichi Bay and the Richibouctou River, is a major problem. The average annual bycatch is estimated at 20 to 40 tonnes for white hake, 3 to 4 tonnes for winter flounder and 100,000 to 500,000 striped bass. Catches of striped bass are by far of the greatest magnitude and of the most concern, given the seriousness of the threat to striped bass stocks in the Gulf and the fact all Gulf striped bass spawn in the Miramichi. The Miramichi River is the northern limit for striped bass reproduction in North America.

The request to keep any winter flounder bycatch has been made at several advisory committee meetings.

Approach

The *Fishery (General) Regulations* clearly state that every person who catches fish incidentally shall immediately return it to the waters from which it was taken. With the exception of section 4(2) of the *Maritimes Provinces Fisheries Regulations*, which authorizes the retention of Atlantic tomcod, there are no regulations authorizing the retention of any other fish caught incidentally in the smelt fishery.

Following repeated requests by the Advisory Committee to retain a percentage of flounder bycatch, DFO maintains that this practice is contrary to the conservation and protection measures that require groundfish licence holders to protect juvenile fish by returning winter flounder less than 25 cm to the water. The measures also include the establishment of a small fish protocol which would require fishers whose small fish catch exceeds the limit to stop fishing in that area for a period of 10 days.

The request is therefore denied.

7.12 Trout bycatch in ice fishing

Issue

Some owners set up their smelt shacks on the ice upriver, where trout bycatch is higher.

Approach

DFO has issued an order to close the smelt and tomcod fisheries in certain rivers to eliminate abusive practices and poaching.

7.13 Impact of other fisheries on the smelt fishery

Issue

The gaspereau fishery results in smelt being caught and enmeshed in box nets. The impact of this fishery on the smelt fishery is not known.

Approach

A study on the impact of box net mesh size in the gaspereau fishery on the smelt fishery will be necessary before identifying management measures for smelt bycatch in the gaspereau fishery. Unfortunately, DFO's human and financial resources do not permit this initiative. If a solution is proposed, a co-operation agreement between the Advisory Committee members will be studied and evaluated by DFO.

7.14 Sale of recreational catches

Issue

The growing use of smelt shacks and local illegal sale of the product of this recreational fishery is of concern to commercial fishers.

Approach

DFO is trying to quantify and monitor this activity more closely, because it is difficult to prove that sales are taking place. Management measures to better control this fishery will be contemplated once there is a better understanding of the situation.

7.15 Block issuance of replacement licences

Issue

Licensing policies prohibit any change in licence conditions when replacement licences are issued. When replacement licences are issued in a block, in other words, transferred from one coastal fisher or core group to a new entrant (all the licences must be replaced), the condition of the smelt licence could specify an area far from the residence of the new licence holder.

Approach

The licensing policy will be maintained and conditions may no longer be modified.

7.16 Licence conditions

Issue

Licence conditions governing the location of fishing gear are not the same for all Eastern Area fishers. Some licenses have conditions specific to an ecosystem, others allow fishing in an area that could cover up to an entire county, while still others do not have any conditions as to the area to be fished.

Approach

Licence conditions should be reviewed to reflect the exact location of the fishing gear (to be determined by satellite or any other geographic coordinates) where fishing is carried out. To accelerate and facilitate the work, the fishers are invited to provide precise coordinates of all their fishing gear to DFO.

7.17 Increase in the maximum number of box nets and/or bag nets

Issue

Several Advisory Committee members have asked that the maximum number of box nets and/or bag nets be increased from 15 to 25.

Approach

The Advisory Committee requested a maximum amount of gear of 15 units in 1984 to allow better distribution of licences and to avoid the situation where a few groups of fishers would have a monopoly on the smelt fishery. DFO received very little support for the proposed increase and, as a result, no change will be made.

7.18 Habitat protection

Issue

Some smelt shack users and recreational tomcod fishers leave behind various objects used when fishing (for instance, white cloth that is used to see the fish better or abandoned shacks).

Approach

There are a number of federal and provincial regulations dealing with smelt shacks and habitat protection. Section 35(1) of the *Fisheries Act* is one. DFO has indicated that such practices lead to an unacceptable degradation of water quality and that this affects not only smelt but all species.

7.19 Use of environmentally hazardous substances

Issue

In the past, some commercial and recreational fishers have used windshield washer fluid to keep their fishing holes free of ice.

Approach

Environment Canada has confirmed that windshield washer fluid is toxic when used in smelt fishing even when the label claims that it is non-toxic. The use of windshield washer fluid is contrary to section 36(3) of the *Fisheries Act*.

7.20 Degradation of spawning habitat

Issue

The alteration and destruction of spawning habitat and the estuaries is causing a decline in smelt landings.

Approach

An inventory of spawning grounds and of disturbances such as barriers to migration, dredging, shoreline alteration, beaver dams, industrial disturbances, etc. should be conducted together with the watershed management committees to get a better idea of the impact of these activities on the smelt population. Fishers should encourage management of the uses the area is put to with all watershed users in order to correct any identified problems and better control the proliferation of marine algae in watercourses, which endangers the survival of smelt eggs.

7.21 Representation on the advisory committee

Issue

Some fishers do not feel adequately represented on the Smelt Fishery Advisory Committee. There seems to be a lack of understanding of the mandate and the role of the advisory committee members.

Approach

Advisory committee members should be informed of their roles and the committee's mandate. They should meet with the fishers in their area before advisory committee meetings and science workshops, and would consequently be better able to defend the interests of all users and ensure better management of their resource. The role and responsibilities of the representatives are outlined in Section 1.6 – Advisory Process. Fishers who are not satisfied with their representative or with the Advisory Committee should inform DFO in writing as soon as possible.

8. DETAILED MANAGEMENT MEASURES

8.1 Reporting of landings

The mandatory logbook program has been discontinued. Landings must be reported where the catch took place.

8.2 Number and length of leaders

The number and length of leaders can be changed by the licence condition. If the fishing effort is increased, DFO may use licence conditions to limit the number and length of leaders.

8.3 Distance between fishing gear

DFO will enforce regulations regarding the specified distance that must exist between gear. However, fishers will be able to set two trap nets end to end: trap/leader/leader/trap or box/leader/box/leader - two tags will be required. This will be a condition of the licence.

8.4 Bycatch

Further to the science workshop in March 1999, the DFO is seeking to reduce bycatch by setting the opening date for the fishery after the spawning runs of species that are caught incidentally. To this effect, a season for the Miramichi River was set so as to reduce such incidental catches. This will also be done for the other rivers. In addition, according to the regulations, any incidental catches, with the exception of Atlantic tomcod, must be released immediately. As a result of the work being done on fishing gear selectivity, modifications designed to make the gear more selective will be identified.

8.5 Tagging and identification of fishing gear

All gear must be identified and bear a tag whose number will be listed on the licence. Fishers will be provided with one tag for each trap net and bag net and one tag for every fifteen fathoms of gill net. The tags will be different colours.

8.6 Open and close times

The smelt fishing seasons are determined following an annual consultation with fishers. An order is published to that effect and the notice to fishers indicates the seasons for the current year.

8.7 Removal of fishing gear from the water at the end of the season

All gear will have to be removed from the water by no later than the close date.

8.8 Issuance of replacement licences for licences held by full-time and core fishers using vessels over 50 feet

Replacement licences will be issued to coastal and core fishers with vessels under 50 feet.

8.9 Issuance of licences that straddle two calendar years

Since the 1999/2000 season, licences are valid for the period from April 1 to March 31 each year.

8.10 Licences, gear and location of gear

Licences and the amount of gear will be limited. Changing the location of gear will not be permitted.

8.11 Licensing policy for the issuance of replacement licences

The holder of a commercial smelt licence may increase the number of pieces of gear listed on his licence by obtaining the gear of another licensed fisher, up to 15 pieces, in accordance with the criteria set out in the policy. Box net and/or bag net splits are now permitted. Details of the policy can be found in Appendix 5.

8.12 Commercial smelt fishing licences for the waters of Kouchibouguac National Park

With the creation of Kouchibouguac National Park in 1969, all commercial fishing activities within park boundaries were abolished and the fishers compensated. In the fall of 1979, pressure was brought to bear to reinstate fishing in the park and the Minister responsible for Parks Canada granted, in 1980, the right to fish for smelt, eel and gaspereau under certain conditions. Licences were issued to fishers with a home port at Cap St-Louis or Loggiecroft (within park boundaries) in 1979 and 1980 and to commercial fishers who had held licences in 1967, 1968 or 1969. The commercial fishery will be phased out gradually when there are no more fishers eligible for replacement licences.

9. CONSERVATION AND PROTECTION PROGRAMS AND STRATEGIES

The Conservation and Protection Branch will ensure compliance with the management plan and shall:

- ensure compliance with the licence conditions;
- monitor the number and length of leaders as prescribed by the licence condition and Regulations;
- enforce the regulation regarding the spacing of gear as specified but allow the installation of two trap nets end to end (trap/leader/leader/trap or box/leader/box/leader - two tags being required);
- monitor bycatch;
- verify the identification and tagging of fishing gear;
- ensure compliance with open and close times;
- ensure that all gear is removed from the water by the close time;
- carry out all other tasks required under the Regulations and management plan.

10. INDUSTRY RESPONSIBILITIES

Fishers are showing more and more interest in how to manage the smelt fishery and are interested in evaluating and proposing new management measures. Fishers' associations should play a greater role in the management of this fishery. The associations should form a group to deal with the conservation and management of smelt on a watershed basis, thus becoming a partner in co-management. Consultations would be conducted by the group, with meetings chaired by the industry, and DFO would address management issues directly with the group.

In addition, so as to support the principles of the *Oceans Act*, the partners involved in such a group will have to represent coastal communities, the fishing industry, non-government organizations, environmental groups, the Aboriginal peoples, provincial governments, federal departments, the academic community, in short, all potential users of the resource and its habitat.

11. DFO ROLES AND RESPONSIBILITIES

Fisheries Management

- direct and consolidate consultations with the various divisions of DFO in order to develop management options
- responsible for consultations with the industry and the provincial government
- responsible for management before, during and after the season
- responsible for licensing

Habitat Management

- facilitate the identification of factors limiting smelt productivity in the watershed
- evaluate potential impacts on habitat of project referrals and major projects
- assist local groups with watercourse rehabilitation
- assist watershed management committees and Industry with best practices and guidelines for fish habitat protection
- offer advice on fish passage

Oceans

- encourage the development and implementation of an Oceans Strategy that will allow Canada to give concrete shape to its vision of how estuarine, coastal and marine ecosystems should be managed. This strategy must ensure the health, safety and prosperity of the oceans for the benefit of Canadians today and in the future

This strategy promotes the application of the guiding principles of the *Oceans Act*, namely:

- conservation, in accordance with an ecosystem-based approach, which is of fundamental importance for safeguarding the biological diversity and productivity of the marine environment
- application of the precautionary principle, i.e., erring on the side of caution when fishing, so as to protect these resources and preserve the marine environment
- sustainable development, i.e., development that meets the needs of the present without compromising the ability of future generations to meet their own needs

This strategy will be implemented in collaboration with the other federal departments and agencies, provincial and territorial governments, Aboriginal organizations, coastal communities and other stakeholders.

Science – Diadromous Fish

- define biological reference points for diadromous fish in the southern Gulf
- assess the exploitation rates of selective fisheries with respect to the points of reference
- conduct research into species biology, population dynamics and ecological associations with population numbers and sustainability
- provide advice on the appropriateness of possible management measures in order to address conservation concerns
- accurately define the data needed to make adjustments during the fishing season and to do the post-season assessments

Conservation and Protection

- ensure follow-up, control and monitoring of regulatory programs that require fishery officers to be deployed on land, sea and air
- the division's activities aim to comply with legislative policies, plans and programs related to conservation and protection of the fisheries resources of Canada
- responsible for initiating applications to change regulations that are necessary to support DFO management plans and programs

Science – Other

- provide opinions on water quality
- provide opinions on contaminants
- help determine causes of fish mortality
- provide opinions during evaluation of major projects
- provide information on the location of essential habitats

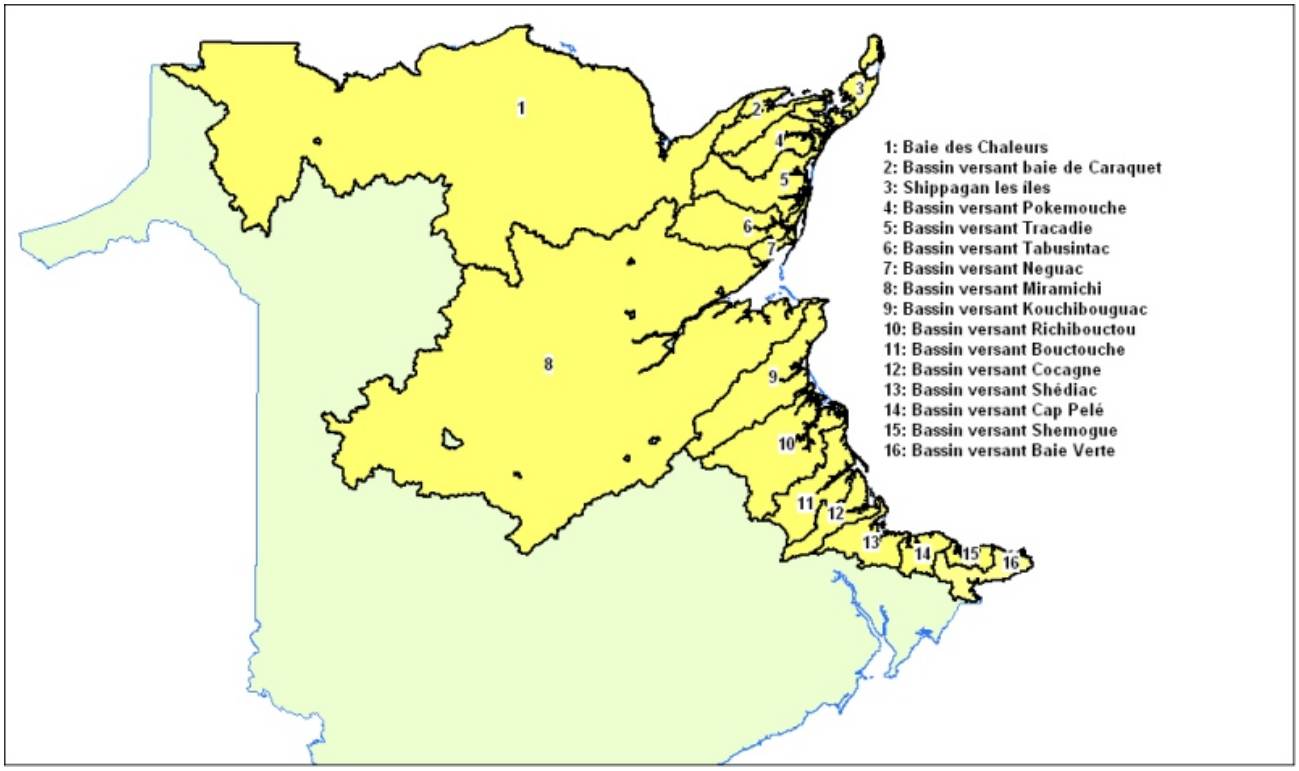
Aboriginal Affairs

- continue to develop harmonious relations with Aboriginal groups, paying special attention to food, social and ceremonial fisheries, commercial communal fisheries, follow-ups to DFO policies and programs and a transparent advisory process

Communications

- provide advice on communication strategies for management plans

Appendix 1. Map and Descriptions of Ecosystems



1: Chaleur Bay
2: Caraquet Bay watershed
3: Shippagan les Îles
4: Pokemouche watershed
5: Tracadie watershed
6: Tabusintac watershed
7: Neguac watershed
8: Miramichi watershed
9: Kouchibouguac watershed
10: Richibouctou watershed
11: Bouctouche watershed
12: Cocagne watershed
13: Shédiac watershed
14: Cap Pelé watershed
15: Shemogue watershed
16: Baie Verte watershed

Watershed Boundaries

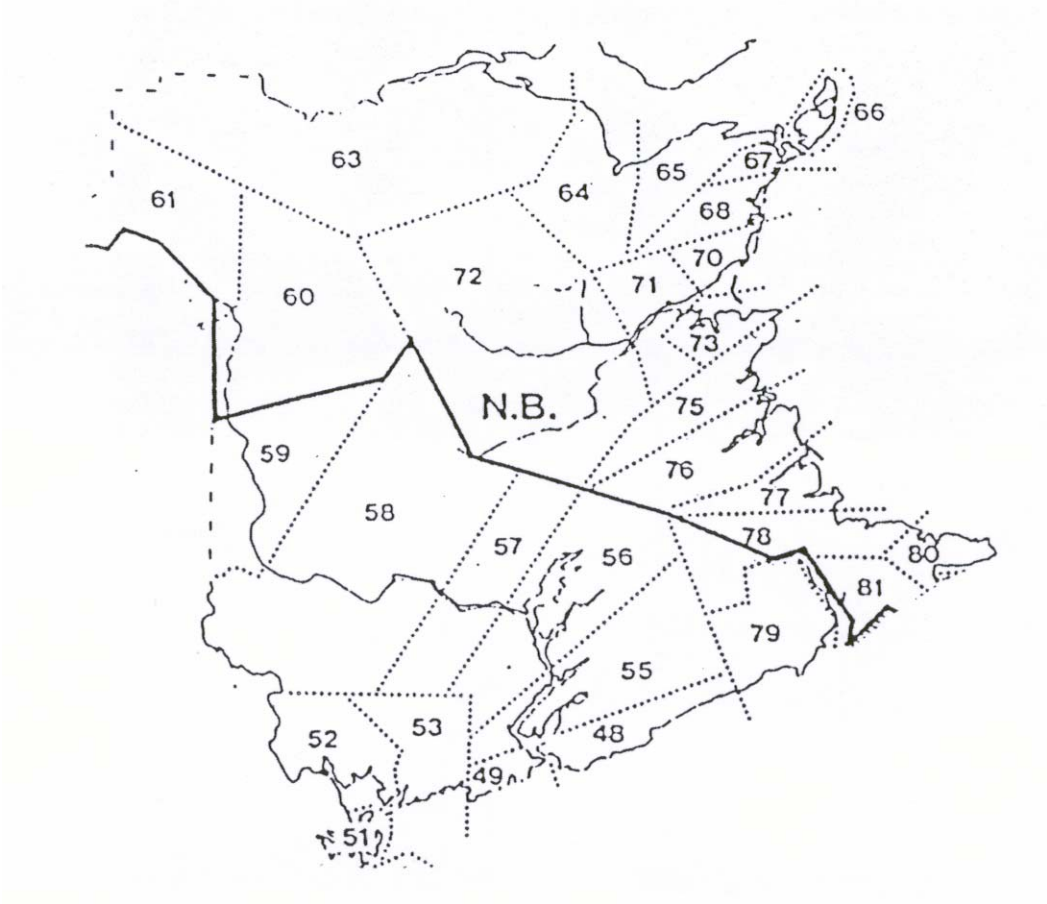
Zone	Description	Comments
1	From Dalhousie to Pokeshaw	Includes Pokeshaw
2	From Grande Anse to Pointe de Pokesudie	Ends at Pointe de Pokesudie of the Island. The eastern coast of Pokesudie is in the next zone
3	From Pointe de Pokesudie up to and including Petit Pokemouche Bay	Includes Lamèque and Miscou Islands
4	Baie de Pokemouche to Green Point	
5	Green Point to Pointe à Barreau	Just after Val Comeau
6	From Chemin de la Cédrière to Swinging Gully	Swinging Gully is between Tabusintac and Neguac Bays
7	From Swinging Gully to Rivière des Caches	Includes the saltwater region of its mouth
8	Pointe Morin to Pointe Escuminac	
9	From Saint Camille up to and including Baie de Saint-Louis	
10	From the southern tip of north Richibouctou dune up to and including Richibouctou Cape	A small part of St. Louis Bay could be considered part of the Richibouctou Bay watershed, but since this bay belongs to the KFN, it is not identified in its territory
11	From Cap Gras up to and including Saint-Thomas-de-Kent	
12	From Bar de Cocagne to Cocagne Cape	
13	From Caissie Cape to Cap Bimet	
14	From Barachois to Trois Ruisseaux	
15	From Petit Cap up to and including the area of Murray Beach Provincial Park	
16	From Murray Corner to Baie Verte	

LANDING PORTS BY WATERSHED

1 – Dalhousie	2 - Morais	3 - Pointe Canot	7 – Lower Néguac
1 – Jacquet River	2 – Middle Caraquet	3 - Upper Shipppagan	7 - Malpeque
1 – New Mills	2 - Pokesudie	3 - Ste Cécile	7 – Malpeque Bay
1 – Eel River	2 – Pokesudie Island	3 – Chiasson Office	7 - Néguac
1 – Heron Island	2 – Blanchard Settlement	4 - Inkerman	7 - Portage River
1 – Bathurst	3 – Lamèque	4 – Inkerman Ferry	8 – Point Gardiner
1 – Belledune	3 – Petit Shippagan	4 - Pokemouche	8 - Burnt Church
1 – Pointe Verte	3 – Miscou	4 – Pokemouche River	8 – Miramichi Bay
1 – Petit Rocher	3 – Miscou Centre	4 - Evangéline	8 – Chatham
1 – Stonehaven	3 – Miscou Harbour	5 – Big Tracadie River	8 – Douglastown
1 – Miller Brook Wharf	3 – Little Lamèque	5 - Pont Lafrance	8 – Loggieville
1 - Benjamin River	3 – Pigeon Hill	5 – Tracadie	8 - Lower Newcastle
1 – Charlo	3 – Point Alexandre	5 – Tracadie Bay	8 - Napan Bay
1 – Nigadoo	3 - Ste. Marie sur Mer	5 – Tracadie River	8 – Napan
1 – Restigouche	3 – Savoy Landing	5 - Val Comeau	8 – Napan River
2 – Caraquet	3 – Shippagan	5 – Four Roads	8 – Newcastle
2 – Anse Bleue	3 - St. Simon	5 – Sheila	8 – Oak Point
2 – Caraquet Bay	3 - Le Goulet	6 – Brantville	8 – Point au Carr
2 – Grande -Anse	3 - Pointe Brûlée	6 – Tabusintac	8 – Miramichi River
2 – Bas Caraquet	3 - Cap Bateau	6 – Tabusintac River	8 – Black River
2 - Maisonnette	3 – Miscou Island	6 – McEachern Point	8 – Baie Ste. Anne
8 – Bay Du Vin River	9 - St. Louis Cape	11 - St. Edouard	14 – Aboujagane

8 – Black River Bridge	9 – Lower St. Louis	11 – Ste Marie	14 – Aboiteau
8 - Escuminac	9 – Ste Anne de Kent	11 - St. Thomas	14 – Kouchibouguac River
8 - Hardwicke	10 – Cap Lumière	11 – Cote Ste. Anne	14 - Barachois
8 - Miramichi	10 - Richibucto	11 – Cormierville	15 – Petit Cap
8 – Eel River Bridge	10 – Richibucto Cape	11 – Comeau Point	15 – Little Shemogue
8 – Victoria Bridge	10 – Big Cove	12 – Cocagne	15 – Amos Point
8 – Egg Island	10 – Nicholas River	12 – Cocagne Cape	15 – Shemogue
8. – Point Gardiner	10 - St. Charles	12 – Cocagne River	15 – Upper Cape
8 – Fox Island	10 – Indian Island	12 – Cocagne Bar	16 – Baie Verte
8 – Mill Bank	10 – Grande Aldouace	13 – Caissie's Cape	16 – Bayfield
8 – East Point	10 – Rivière Richibucto	13 – Grand Digue	16 - Cap Tormentin
8 – Escuminac Point	10 – Aldouane	13 – Pointe du Chêne	16 – Murray Corner
8 – New Jersey	10 – Bass River	13 – Shédiac	16 - Peacock Cove
9 - Kouchibouguac	10 – Richibouctou Village	13 – Shédiac Bridge	16 – Port Elgin
9 - Loggiecroft	11 - Bouctouche	14 – Cap Pelé	16 – Botsford
9 – Point Sapin	11 – Bouctouche Bay	14 - Bas Cap Pelé	
9 – St. Louis	11 – Bouctouche River	14 – Robichaud	

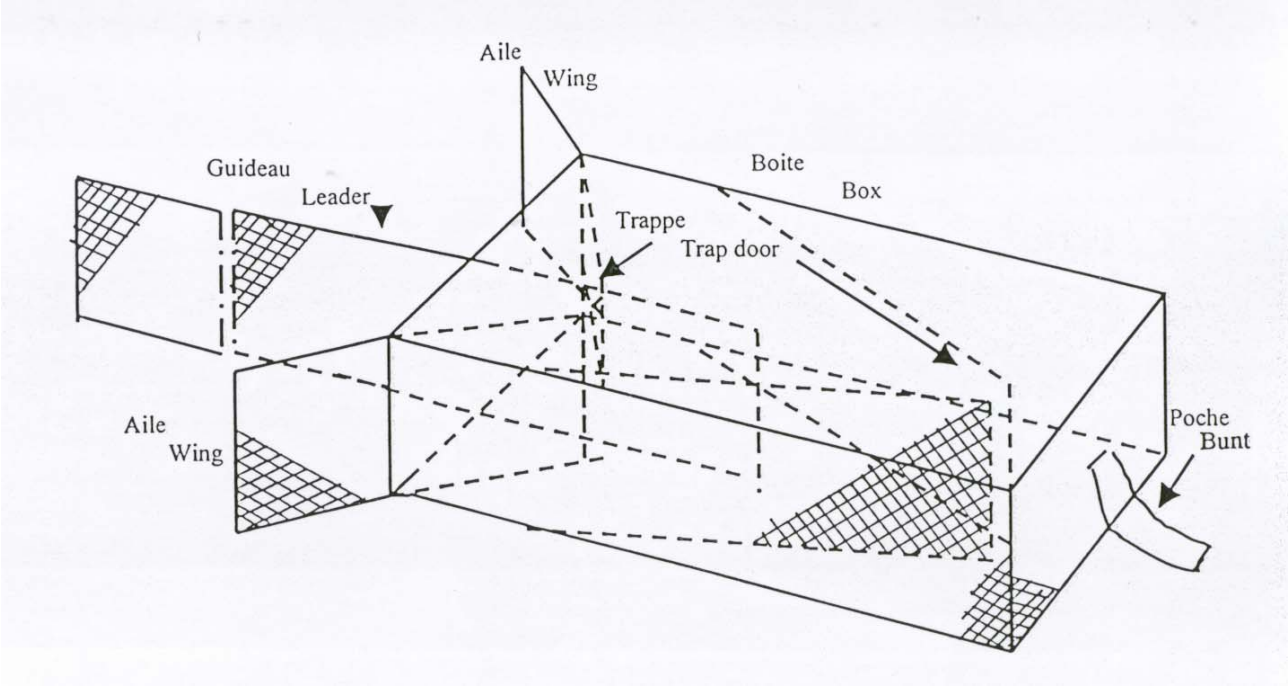
Appendix 2. Map and Description of Statistical Districts



63 – Restigouche County
64 – Restigouche County line to Bass River (incl.)
65 – Bass River (excl.) to Pokesudie Island (incl.)
66 – Lamèque Island and Miscou Island
67 – Shippagan to Pokemouche Gully (incl.)
68 – Pokemouche Gully (excl.) to Northumberland County line
70 – Northumberland County line to Grand Dune Island (incl.)
71 – from Grand Dune Island to Morrisey Bridge on the north side of the Miramichi River and Morrisey Bridge to Point au Carr (incl.) on the south side
73 – Point au Carr (excl.) to Kent County line
75 – Kent County line to the south side of the St. Louis River (incl.)
76 – south side of St. Louis River (excl.) to Chockpish River
77 – south side of Chockpish River to Westmorland County line
78 – Westmorland County line to Bas Cap Pelé (incl.)
80 – Bas Cap Pelé (excl.) to N.B./N.S. border

Appendix 3. Models of Fishing Gear

MODEL OF SINGLE BOX NET

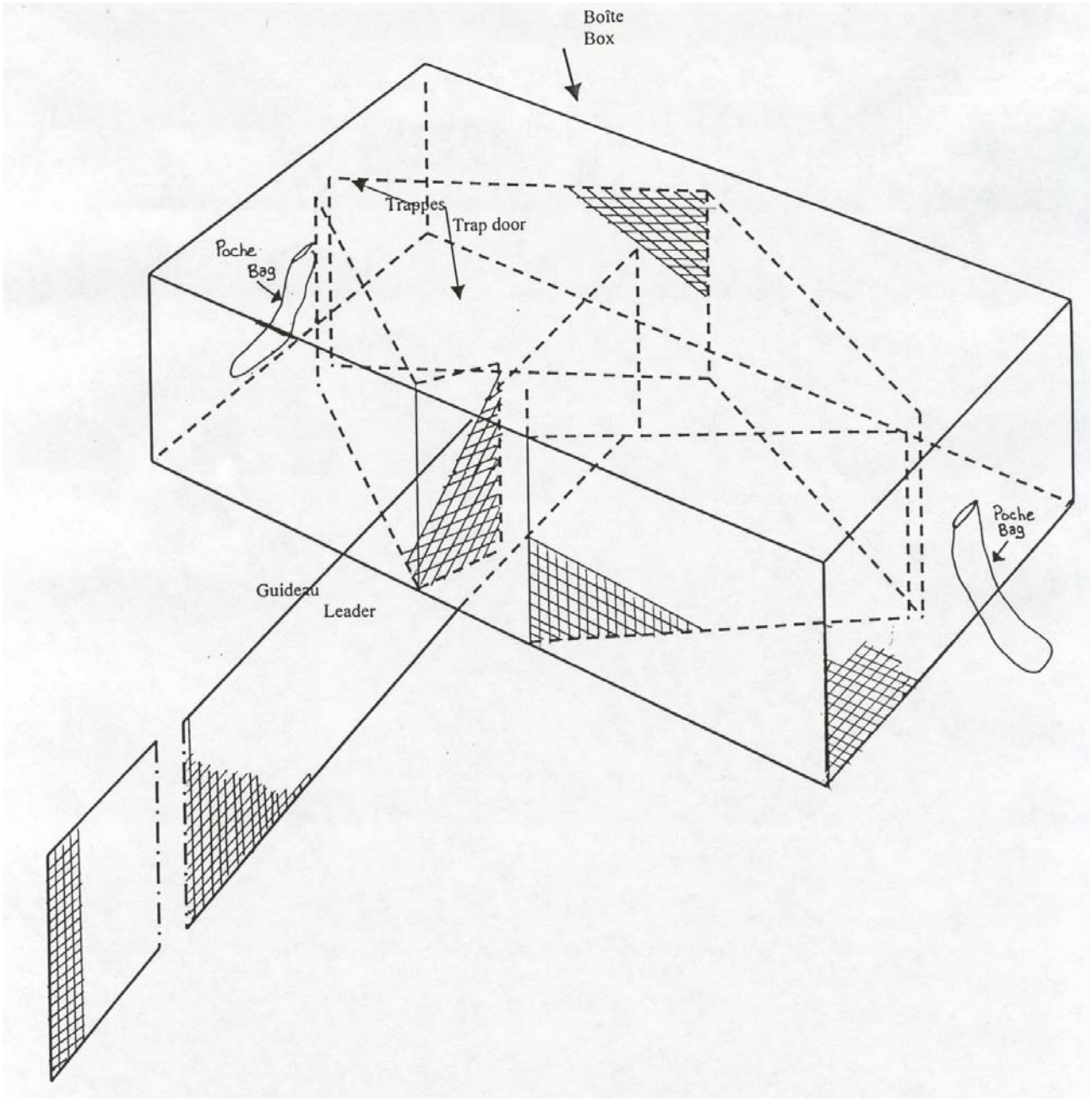


APPROXIMATE DIMENSIONS:

11 m (36') long x 4 m (13') wide x 2.5 m (8') high

31 m long leader

MODEL OF DOUBLE BOX NET



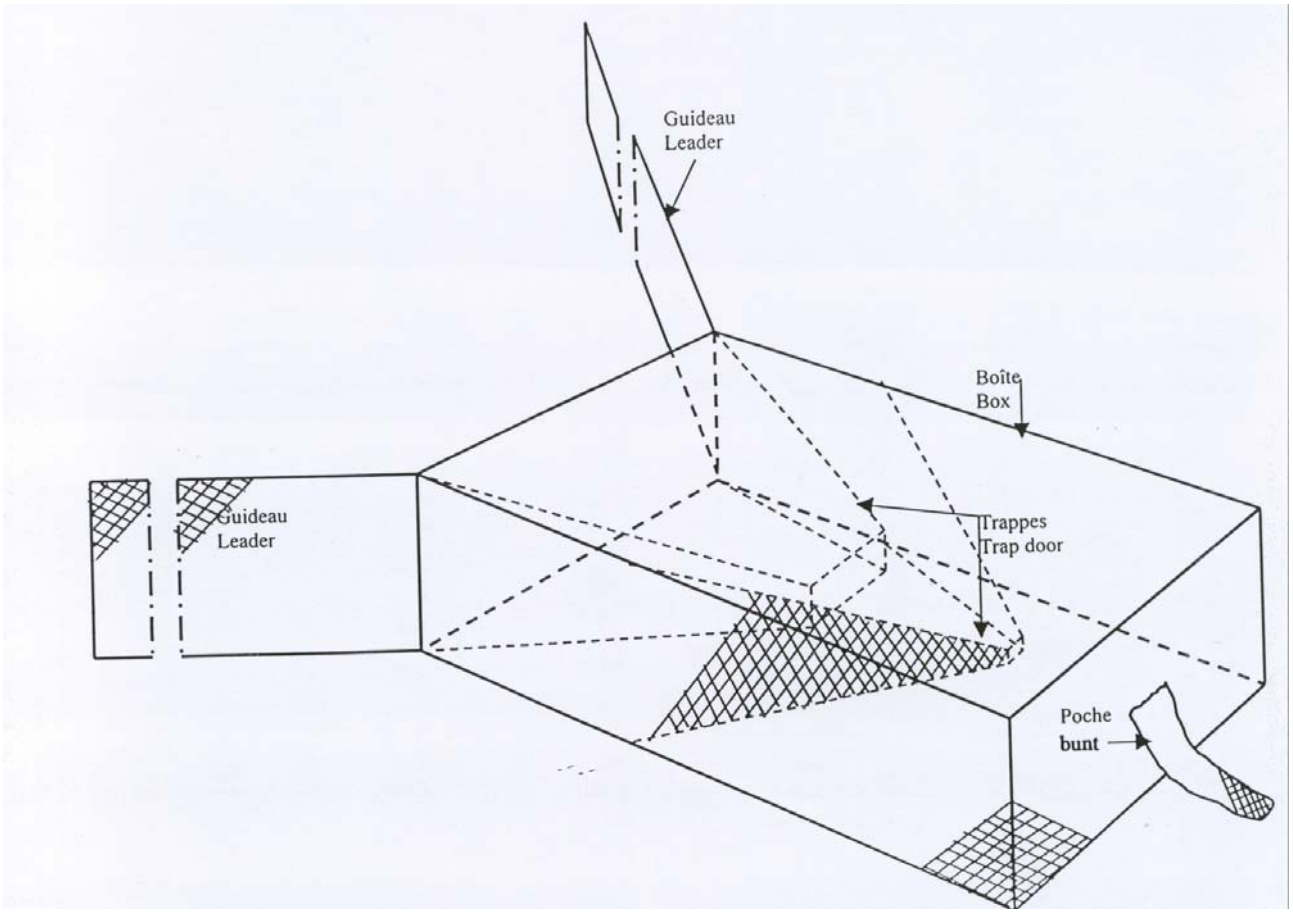
APPROXIMATE DIMENSIONS:

14 m (36') long x 4 m (13') x 2.5 m (8') high

31 m long leader

MODEL OF SQUARE NET (named by fishers)

The square net is no longer used in fisheries in Eastern New Brunswick.

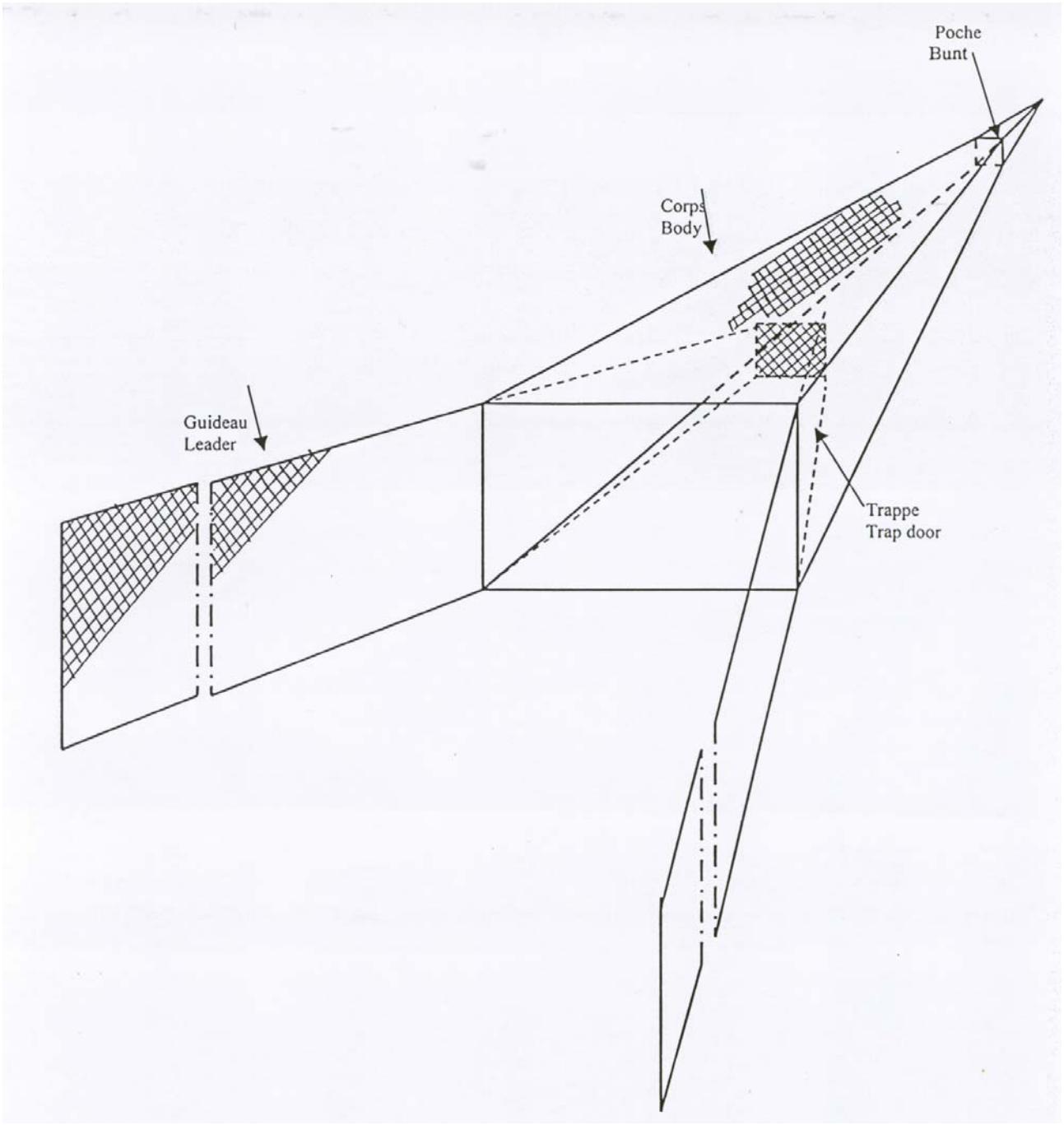


APPROXIMATE DIMENSIONS:

11 m (36') long x 4 m (13') wide x 2.5 m (8') high

31 m (100') long leader

MODEL OF BAG NET

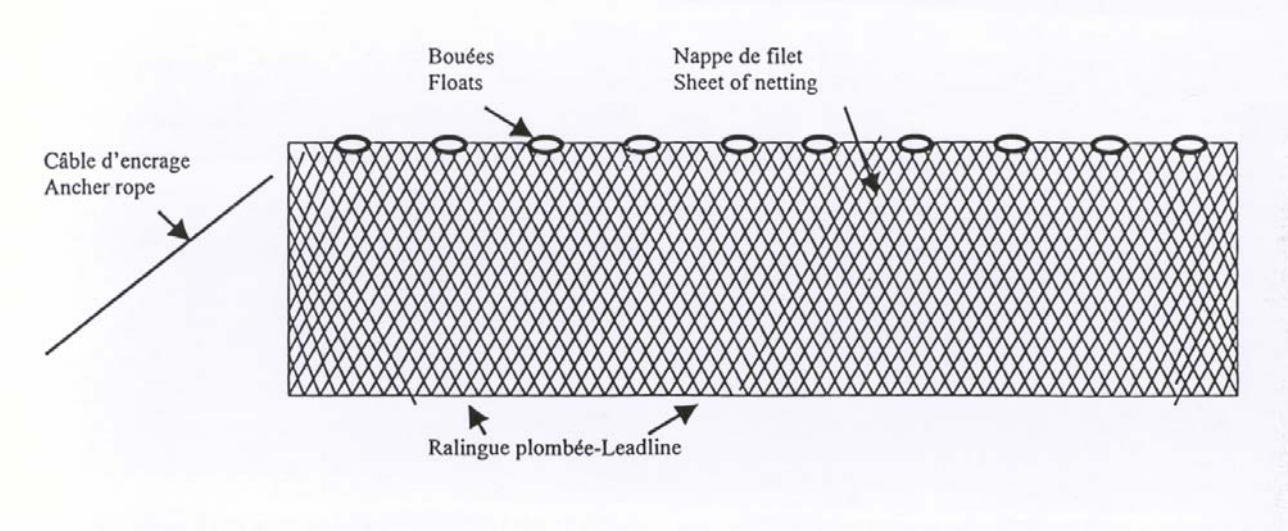


APPROXIMATE DIMENSIONS:

17 m (56') long x 8.5 m (28') wide

10 m (33') long leader

MODEL OF GILL NET



APPROXIMATE DIMENSIONS:

10-15 fathoms x 1.5 m (5') high

SPEAR AND LINE

Appendix 4. Eastern New Brunswick Smelt Fishery Advisory Committee Members

Arthur Arseneault
Tracadie –Sheila

Albert E. Babineau
Richibouctou Village

Gerald Beck Rexton

Claude Benoit
Val Comeau

Guy E. Caissie
Grande-Digue

Chief
Bouctouche First Nation

Chief
Burnt Church First Nation

Chief Eel Ground First Nation

Chief
Eel River Bar First Nation

Chief
Elsipogtog First Nation

Chief
Indian Island First Nation

Chief and Presiden
N.B. Aboriginal Peoples Council

Chief
Red Bank First Nation

Almas Chiasson
CFIA – Shippagan

Kenneth G. Clark
Miramichi

Emmanuel Moyen
MFU – Tracadie-Sheila

Guy B. Cormier
Cap Pelé

Paul Cormier
NBDAFA – Caraquet

Edmond Drysdale
MFU – Shediac

Denis A. Duguay
Pointe-Alexandre

Omer Duplessis
Bouctouche

Jean-Louis Gallant
Cap Pelé

Jean Gauvin
CFIA - Shediac

Mario Guignard
Pigeon Hill

Brian J. Kelly
Miramichi

Léophane LeBlanc
Kouchibouguac National Park

William W. MacEachern
Tabusintac

Jean-Marie Maillet
Richibouctou-Village

Donald Martin
St. Louis

Michael McIntyre
Escuminac

Kevin B. Morrison
Oak Point

Allison Robichaud
Richibouctou

Alvin J. Scott Lower Newcastle

Georges L. St-Coeur
Neguac

Ralph Charles Taylor
Chatham

Kenneth Williston
Bay-du-Vin

Area Director
DFO – Tracadie-Sheila

Chief, Resource Management
DFO – Tracadie-Sheila

Chief, Conservation and Protection
DFO – Tracadie-Sheila

Chief, Oceans and Habitat
DFO – Tracadie-Sheila

Coordinator, Licensing DFO – Tracadie-Sheila

Fishery Officer
Conservation and ProtectionDFO – Tracadie-Sheila

Officer, Resource Management DFO – Tracadie-Sheila

Officer, Statistics DFO – Tracadie-Sheila

Science Branch
DFO – Moncton

Appendix 5. Licensing Policy for the Commercial Smelt Fishery in the Eastern New Brunswick Area

- No new commercial smelt fishing licence may be issued

- Replacement licences may be issued:

  for transfers from coastal and core fishers to other coastal fishers or core fishers and to new entrants (all the licences must be replaced).

- To qualify as a new entrant and obtain a replacement licence for smelt fishing, it is necessary:

  1 - to have fished commercially for at least five weeks in each of the two previous years;

  2 - to be registered as a commercial fisher for each of the last two years;

  3 - to be recognized as a commercial fisher in one's community.

A licence holder cannot have the licence validated for other waters than those indicated on the licence.

- When a replacement licence is issued, it must contain the same amount of gear as contained in the licence it replaces, except where a reduction in the amount of gear is necessary to reduce the fishing effort in an ecosystem. The number of licences may not change.

Once a replacement licence is issued, the conditions of the replacement licence will be the same as those attached to the replaced licence, except where the amount of gear must be reduced on corrections must be made to the conditions. The amount of gear may be modified in accordance with the following conditions:

- A new entrant may not obtain more than 15 box nets or 15 bag nets, or a total of 15, when the two are combined.

- Unless the new entrant obtains the smelt licence and all the other licences of a current fisher (unless the only other licence is a mussel licence), the new entrant may not obtain less than 8 box nets or 8 bag nets or a total of 8, when the two gear types are combined or, if gill nets are listed on the replacement licence, the new entrant may not have less than 7 box nets or 7 bag nets or a total of 7, when the two gear types are combined. The new entrant may, however, simultaneously obtain replacement licences from several current fishers in order to acquire the minimum amount of gear;

- Two current smelt licence holders may split the number of box nets or bag nets between them, as long as the holder decreasing the amount of gear has more than 8 box nets, or more than 8 bag nets or more than 8 box or bag nets, when the two types are combined, or, if the licence includes gill nets, the number of box nets, bag nets or box and bag nets combined is more than 7. The licence holder decreasing the number of box and/or bag nets on his licence cannot be left with less than 8, and anyone increasing his number of box and/or bag nets cannot have more than 15;

- A fisher who would like to give up his smelt fishing licence may split the gear among several fishers, as long as all the gear is disposed of simultaneously and the recipients are current smelt fishing licence holders who, once the split gear is received, will do not have more than 15 box nets or 15 bag nets or 15 box or bag nets, when the two types are combined.

- Splitting the gill nets from the other types of gear is permitted between two current smelt fishing licence holders, as long as the individual giving up the gill nets has more than 7 box nets or more than 7 bag nets or more than 7 bag and box nets, when the two types are combined.

- A fisher who requests an increase in the amount of gear on his licence cannot request a gear split, which would result in a reduction in the amount of gear, for a period of twelve months.

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Appendix 7. Regulations Governing the Smelt Fishery in the Eastern New Brunswick Area

The following articles are taken from various provincial and federal regulations and are subject to change without notice.

The Department of Fisheries and Oceans assumes no responsibility for the accuracy or reliability of any reproduction of federal legislative documents that are in this plan's appendix. These documents are prepared only for the convenience of the reader and have no official sanction. For the purpose of interpreting and applying the law, the reader must consult:

a) the Acts as passed by Parliament which are published in the "Assented to" Acts service, Part III of the Canada Gazette and the annual Statutes of Canada; and

b) the regulations as registered by the Clerk of the Privy Council and published in Part II of the Canada Gazette.

- No person shall fish for or catch and retain any fish unless the following conditions are met: the person is authorized to do so under the authority of a licence issued to that end; the person holds a fisher's registration card; and, where a vessel is used in fishing, a vessel registration card has been issued in respect of that vessel. (s. 4(1), *Maritime Provinces Fishery Regulations*)

- Every holder of a licence or fisher's registration card shall carry it at all times when engaged in any activity to which it relates and shall produce it on the demand of a fishery officer or fishery guardian. (s. 11, *Fishery (General) Regulations*)

- The operator of a vessel in respect of which a vessel registration card has been issued shall have the vessel registration card and the licence authorizing the use of the vessel on board the vessel whenever the vessel is engaged as a fishing vessel and shall produce them on the demand of a fishery officer or fishery guardian. (s. 12, *Fishery (General) Regulations*)

- No person shall operate or cause to be operated a registered vessel on which the vessel registration number is not painted or securely affixed as required. (s. 26, *Fishery (General) Regulations*)

- No person carrying out any activity under the authority of a licence shall contravene or fail to comply with any condition of the licence. (s. 22(7), *Fishery (General) Regulations*)

- No person shall fish for smelt except by angling or with a bag net, box net, dip net, gill net or spear. (s. 83, *Maritime Provinces Fishery Regulations*)

- Every person who fishes with a gill net shall set it in a straight line. (s. 21, *Maritime Provinces Fishery Regulations*)

- No person shall set, operate or leave unattended in the water any fishing gear unless the gear is marked with the name of the person who owns the gear. The name (in full) must be affixed to a tag, float or buoy attached to the gear, and be legible and readily visible at all times without the necessity of raising the gear from the water. (s. 27, *Fishery (General) Regulations*)

- The person's name must appear in solid block capital letters in Roman letters, without ornamentation; not less than 75 mm in height; and in a colour that contrasts with their background. (s. 27(4), *Fishery (General) Regulations*)

- No person shall leave fishing gear unattended in the water for more than 72 consecutive hours. (s. 27, *Maritime Provinces Fishery Regulations*)

- Except as otherwise provided as a condition of a licence, no person shall fish for smelt or tomcod in waters other than the Miramichi River or Miramichi Bay with a bag net, trap net or gill net:

  - within 45 m of any other bag net, trap net or gill net, or

  - within 90 m upstream or downstream of any other bag net, trap net or gill net. (s. 26(b)(i), (ii), *Maritime Provinces Fishery Regulations*)

- Except as otherwise provided as a condition of a licence, no person shall fish for smelt or tomcod in the Miramichi River or Miramichi Bay with a bag net, trap net or gill net:

  - within 90 m of any other bag net, trap net or gill net, or

  - within 180 m upstream or downstream of any other bag net, trap net or gill net. (s. 26(c)(i), (ii), *Maritime Provinces Fishery Regulations*)

- Except as otherwise provided as a condition of a licence, no person shall fish for smelt or tomcod with a bag net, trap net or gill net within 90 m of a bridge. (s. 26(d), *Maritime Provinces Fishery Regulations*)

- No person shall fish for smelt with a bag net or a box net having a leader that is more than 31 m in length. (s. 85, *Maritime Provinces Fishery Regulations*)

- No person shall fish for smelt with a bag net, box net or gill net that has a mesh size of less than 31 mm. (s. 84, *Maritime Provinces Fishery Regulations*)

- One third of the width of any river or stream and not less than two-thirds of the width of the main channel at low tide in every tidal stream shall be always left open, and no kind of net or other fishing apparatus, logs or any material of any kind shall be used or placed therein. (s. 26(1), *Fisheries Act*)

- Seines, nets or other fishing apparatus shall not be set or used in such manner or in such place as to obstruct the navigation of boats and vessels and no boats or vessels shall destroy or wantonly injure in any way seines, nets or other fishing apparatus lawfully set. (s. 24, *Fisheries Act*)

- No one shall erect, use or maintain in any of the Canadian Fisheries waters, whether subject to any exclusive right of fishery or not, any net, weir or other device that unduly obstructs the passage of fish. (s. 29(1), *Fisheries Act*)

- With the exception of tomcod incidentally caught with smelt fishing gear operated under the authority of a licence, every person who catches a fish incidentally shall forthwith return it to the place from which it was taken and, where it is alive, in a manner that causes it the least harm. (s. 4(2(c)), *Maritime Provinces Fishery Regulations* and s. 33(2), *Fisheries (General) Regulations*)

- No person engaged in recreational fishing for smelt with a dip net, by angling or with a spear shall catch and retain more than 60 smelt in any day (s. 87, *Maritime Provinces Fishery Regulations*)

- Shacks and temporary shelters shall be removed from the ice by the owner by no later than midnight on April 2 in any year or, depending on ice conditions, at an earlier or later date as a fishery officer may direct. (s. 28(4), *Maritime Provinces Fishery Regulations*)

- No person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water. (s. 36(3), *Fisheries Act*)

- No person shall fish for smelt during a close time. (s. 88, *Maritime Provinces Fishery Regulations*)

- No person shall place or set any fishing gear or apparatus in any water, along any beach or within any fishery during a close time. Any person who places or sets any fishing gear or apparatus in any water, along any beach or within any fishery shall remove it when the gear or apparatus is not being tended and prior to the commencement of a close time. (s. 25(1), (2) and (3), *Fisheries Act*)

Appendix 8. Management Plan Evaluation Criteria

The criteria in evaluating the management plan are:

1. actual landings data obtained for the commercial fishery
2. reduction of bycatch
3. catch level maintained
4. inventory of gear locations by ecosystem maintained
5. fishing gear and its effectiveness defined
6. industry feedback
7. timely decision-making
8. communications with the industry
9. intergovernmental relations
10. level of acceptance of and compliance with the management plan

Appendix 9. Conservation and Protection Plan Evaluation Criteria

The conservation and protection plan evaluation criteria quantify the activities of fishery officers in the following regards:

1. number of vessel inspections at wharf/landing site

2. number of boardings of vessels at sea

3. number of fishing gear inspections at sea

4. number of fishing gear inspections at wharf/landing site

5. number of patrols of closed fishing areas

6. number of verifications performed dockside or at the water's edge

7. number of violations

8. number of warnings

9. number of investigations

10. number of surveillance activities

11. number of boat patrols/number of hours at sea

12. number of joint patrols

13. number of hours of intervention by fishery officers

14. cost in wages, overtime, operations and maintenance

Appendix 10. Notice to Fishers

TERMS OF THE 2007–2011 MANAGEMENT PLAN FOR THE SMELT FISHERY – EASTERN NEW BRUNSWICK AREA

TRACADIE-SHEILA – The Department of Fisheries and Oceans today released the integrated smelt fishery management plan for the Eastern New Brunswick Area. This five-year management plan covers the smelt fishery in the coastal and inland waters of New Brunswick for the period 2007 to 2011. It is to be implemented jointly with the annual update, in which certain management measures such as areas, fishing seasons and catch limits may be adjusted on the basis of conservation standards.

The integrated plan is centred on the principles of sustainable development, an ecosystems approach, integrated co-management and a precautionary approach in accordance with the *Oceans Act* and *Species at Risk Act*. The plan lists twenty-one issues relevant to the management of this resource.

In accordance with the provisions of the *Commercial Fisheries Licensing Policy for the Gulf Fisheries Management Region*, a holder of a commercial smelt fishing licence can increase his amount of gear by obtaining the gear of another licence holder, up to a total number of 15 pieces. Also, box net and/or bag nets splits are now permitted. In addition, the logbook program has been discontinued in this fishery; however, other measures may replace this program to register actual landings.

In the Eastern New Brunswick Area, there are 599 holders of commercial smelt fishing licences, who use various types of gear, in particular the single or double box net, the square net, the bag net and the gill net.

The fishing seasons will be modified by an order after consultations with members of the Advisory Committee.

Smelt fishers and their representatives, as well as other stakeholders, sit on the Eastern New Brunswick Smelt Fishery Advisory Committee. The integrated management plan released today is the product of the committee's discussions.

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